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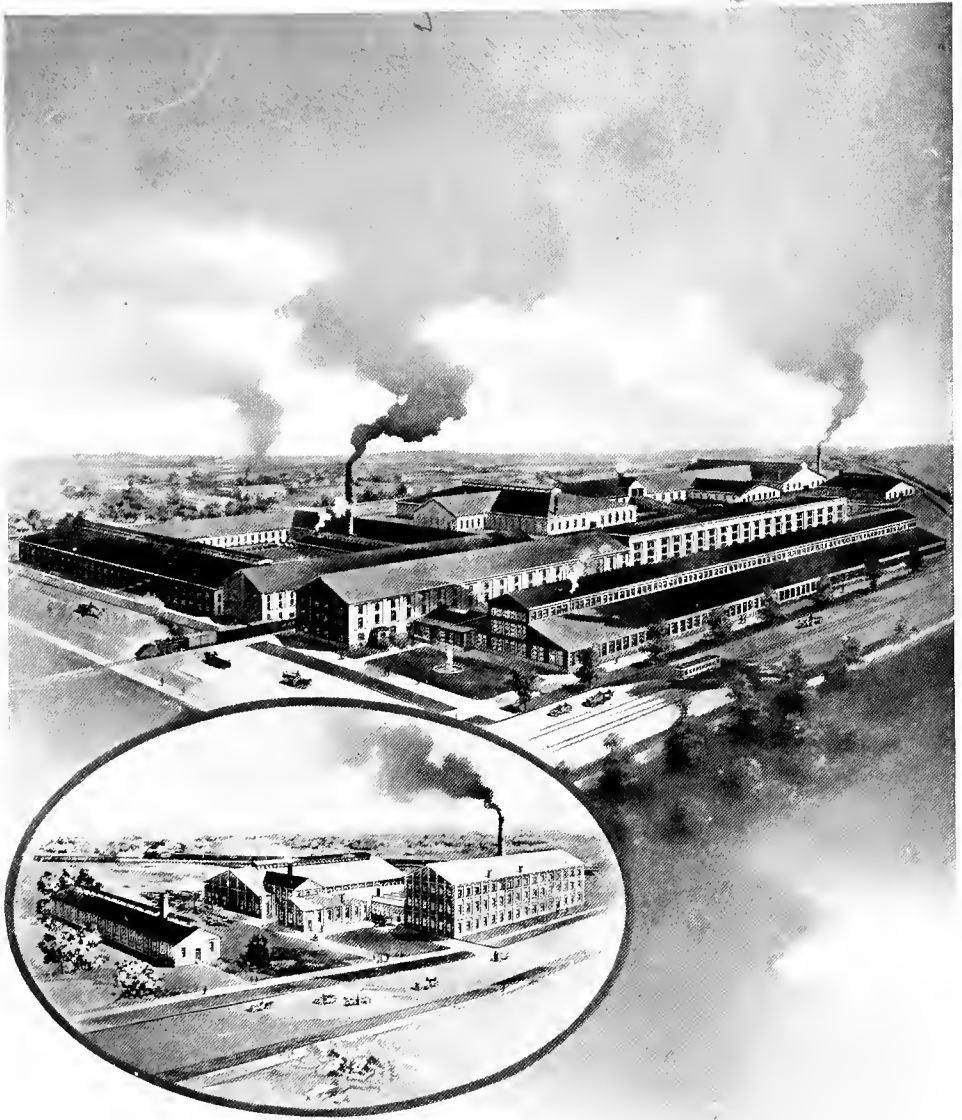
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HAND & POWER PUMPS FOR ALL USES

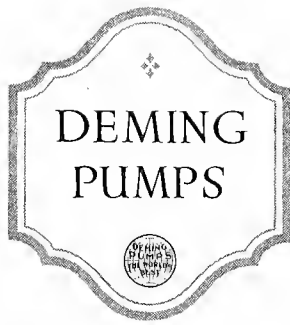


Cistern and Force Pumps
Well Pumps and Cylinders
Spray Pumps and Nozzles
Hydraulic Rams and
Pneumatic Water Systems
Rotary, Centrifugal and
Power Deep Well Pumps
Triplex Power Pumps
Air Compressors and
Pumps for Special
Duties

THE DEMING COMPANY
SALEM, OHIO, U. S. A.



Manufacturing Plants of The Deming Company, where are produced Hand and Power Pumps for all uses. The smaller view represents the Spray Pump and Brass Works Department, located near the Main Works and Power Pump Department



THE various classifications and uses of Deming Pumps are explained in general on the following pages, embracing a Table of Contents, and more fully in the descriptive text and illustrations representing each article. We have endeavored in this Catalogue to embody the best ideas for the convenience of its use by our patrons.

The division into distinct chapters or sections, each embracing a class of Pumps, or Accessories, we believe will be appreciated, as this arrangement enables one by referring to the Table of Contents to easily and quickly find the page on which the Pump or other article is shown. In addition to this general Table of Contents and the division into classified chapters we have the usual Figure Index and the Alphabetical Index. The Engineering Tables and Information relating to Hydraulics, and the Telegraph Cipher Code are useful to the dealer in Pumps.

Over thirty-five years ago we began making Pumps — the simplest kind — Cistern, Pitcher Spout and Set-Length Pumps. Each year the line was increased in variety and volume of product until now there is hardly a pumping condition that is not met by some one of the many pumps made in the Deming factory, embracing a great variety of types, and sizes, for various uses, from the smallest Hand Pump to the most ponderous Power Pump.

Deming Pumps are designed for durability and efficiency by expert engineers and are made of the best materials by experienced mechanics. Modern Machine Tools of the best makes are used, the equipment in our various manufacturing departments being the best obtainable. For the convenience of dealers we issue, in addition to this General Catalogue, separate departmental catalogues, booklets and circulars; principally our Power Pump Catalogue, Spray Pump Catalogue, and Hydro-Pneumatic Water Supply Catalogue.

IMPORTANT SUGGESTIONS

CORRESPONDENCE

In order to insure prompt replies to communications, all letters should be addressed to the Company and not to individuals. Orders should be specific — mention of the Figure and Number or Size, and the Fitting only being necessary. Please do not mutilate this Catalogue.

PRICES AND TERMS

Prices are given to the trade in discount sheets with exception of Triplex and Deep Well Power Pumps which are quoted on application. Trade prices and special quotations are subject to change without notice. Parties not known to us commercially should accompany their orders with cash, or with satisfactory reference. Orders are accepted contingent upon unavoidable delays.



IMPORTANT SUGGESTIONS — (CONTINUED)

ORDERS AND SHIPMENTS

Unless otherwise specified in the order, we will ship by freight, delivery being made F. O. B. cars at factory, except in cases where such shipment had best be made by express or parcels post; and unless specifically mentioned we will in such cases use our judgment. In ordering, the Figure and Number or Size should be specified. We pay particular attention to properly packing goods for export shipment and maintain an export office in New York.

ESTIMATES AND RECOMMENDATIONS

Prospective purchasers will be given estimates on pumping outfits and recommendations as to what is adaptable. This applies particularly to Power Pumping Outfits, Hydro-Pneumatic Water Supply Systems, Hydraulic Rams and Power Spraying Outfits. Special designs and adaptations of power pumps will be made, under agreement, for special purposes and to meet special requirements.

PUMPS NOT LISTED

Our line of Triplex and Deep Well Power Pumps is not complete in this catalogue; only the principal types being shown. The complete line is given in our Power Pump Catalogue. The list prices of many Power Pumps are omitted but will be quoted on application.

DISTRIBUTING AGENCIES

In the principal cities we have distributing agencies for handling Deming Hand and Power Pumps and Water Systems. These agencies have been established for the convenience of dealers in the adjacent territory.

GOODS RETURNED

Pumps and other goods that are returned will not be accepted unless arrangements for their return have been previously made. Always mark your name and address distinctly on the package when returning goods, and send us by mail a memorandum of the same with bill of lading.

ALLOWANCE OF CLAIMS

All claims for corrections or deductions should be made within ten days after receipt of the goods. We are not responsible for breakages after goods are delivered to the transportation company in good condition.

INSPECTION AND TESTING

We take great care in inspecting Deming Pumps as to material and workmanship so that defects are very rare. All Power Pumps are tested in the factory. Charges for labor or expense required to repair defective goods will not be allowed. The amount of damage in such case is only the price of the defective goods, which should be returned to us.

THE ILLUSTRATIONS

As we are constantly making improvements in design and construction of Deming Pumps, the goods ordered, when received, may possibly not be exactly like the engravings in the catalogue. In our old catalogues are shown certain articles not illustrated in later editions. On receipt of specific description, the repairs for such goods may usually be procured from us.

IN CONCLUSION

This catalogue is self-explanatory and is arranged to save unnecessary correspondence. It supersedes all former issues of our General Catalogue. The List and Trade Prices are subject to change without notice.

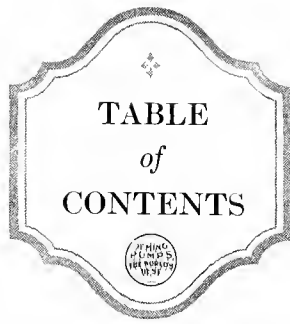


TABLE
of
 CONTENTS

Each Chapter or Classified Section embraces the Pumps or other articles which are related to each other in their most essential points.

When the Figure number of an article is known the same may be found by referring to the Figure Index; and if the name of the article is known it may be found by referring to the Alphabetical Index; both contained in the last chapter of this catalogue.

TITLE OF SECTIONS

	PAGES
HOUSE LIFT AND FORCE PUMPS	9 to 32
Pitcher Spout and Cistern Lift Pumps for Shallow Wells and Cisterns.	
House Force Pumps for Hand Use in Domestic Water Supply.	
SET LENGTH LIFT AND FORCE PUMPS	33 to 60
Non-Freezing Outdoor Pumps for Shallow Wells and Cisterns. Complete Lift and Force Pumps for Hand and Windmill Use with Three-Foot Set-Length between Standard and Cylinder.	
WELL AND WIND MILL PUMP STANDARDS	61 to 86
Lift and Force Pump Standards, Stuffing-box Heads, etc., for either Shallow or Deep Wells; the Cylinder or Working Barrel being separate and usually submerged.	
CYLINDERS AND PUMP LEATHERS	87 to 106
Iron, Brass and Brass-lined Cylinders, Used with Hand and Windmill Lift and Force Standards, Power Working Heads, etc. For general water supply; the Cylinder being usually submerged.	
PIPE, SUPPLIES AND PUMP FIXTURES	107 to 122
Strainers, Float, Check and Foot Valves; Air Chambers, Pump Rod and Couplings, Drive Points, Pipe and Fittings, Sinks, Brass Goods, Hose, Pump Fitters' Tools, Oil and Grease Cups, etc.	
MISCELLANEOUS HAND AND POWER PUMPS	123 to 168
Pumps for the Farm and Factory, Garage, Plumbing Shop, etc., including Thresher Tank Pumps, Contractors' Pumps, Bilge Pumps, Plumbers' Pumps, Factory and Village Fire Pumps, Air Compressors, Hydraulic Rams, Test Pumps, Creamery Pumps, Pump Jacks, etc.	



TITLE OF SECTIONS—(Continued)

CENTRIFUGAL AND ROTARY PUMPS 169 to 184
 Hand and Power Rotary Pumps for Use in Oil Refineries, Creameries, Breweries, Distilleries, Canning Factories, Paint and Chemical Works, etc., also Horizontal and Vertical Centrifugal Power Pumps for Contractors' Use, Draining and Irrigating, etc.

TRIPLEX POWER PUMPS, SINGLE AND DOUBLE-ACTING. 185 to 212
 For Boiler Feeding, Mine Pumping, Water Works, Sewage Pumping, Brine Circulation, Paper Mill Pumping, Hydraulic Pressure Accumulators, Fire Protection Service, Railway Water Supply, Hydraulic Elevator Service, Private Water Supply, Irrigating, etc., for Operation by Electric or Other Power.

HORIZONTAL DOUBLE-ACTING POWER PUMPS 213 to 224
 Double-Acting Power Pumps for Various Duties Operated from any Power Source for Mine Pumping, Contractors' Use, Water Tank Service in Factories and Mills, Pneumatic Tank Service, etc.

DEEP WELL WORKING HEADS 225 to 252
 For Use with Brass Artesian Well and Other Types of Cylinders. For Operation by Electric Motor, Gas or Gasoline Engine, Steam Engine, Horse Power and Windmill; Using Belt, Gearing or Connecting Rod.

HYDRO-PNEUMATIC WATER SYSTEMS 253 to 284
 For Supplying Water to Farm Homes, Suburban Residences, Country Clubs, Summer Homes, Greenhouses, etc., the Tank Pressure in Many Cases being Automatically Controlled, and the Pump Operated by Electric Motor, Gasoline Engine or by Hand.

SPRAY PUMPS AND ACCESSORIES 285 to 314
 Bucket, Knapsack, Barrel, Tank, Compressed Air, and Cart Sprayers for the Garden, Greenhouse and Orchard; Independent Power Spray Pumps and Complete Power Spraying Outfits for Extensive Operations; Field Sprayers, Spray Nozzles, Spraying Attachments, etc.

REPAIRS OR EXTRA PARTS 315 to 332
 Descriptive Tabulated Price Lists of Extra Parts for Deming Hand, Windmill and Power Pumps; Iron and Brass Cylinders, Spray Pumps and Accessories.

TECHNICAL DATA AND ENGINEERING TABLES 333 to 342
 Information for the Engineer, Architect and Manufacturer; Also for Dealers In and Users of Pumps in General; Such as Facts, Formulas and Rules Relating to Hydraulics and Pneumatics; Including Capacities, Power and Speed of Pumps, and Their Operating Factor.

INDEXES AND TELEGRAPH CIPHER CODE 343 to 352
 Embracing Figure Index Arranged by Figure Numbers, Consecutively; and Alphabetical Index Arranged by Name of Article. The Telegraph Cipher Code Defines Sentences Relating to Class of Goods, Inquiries and Prices, Terms and Shipments; Also to Orders and their Execution.



H O U S E L I F T

AND

F O R C E P U M P S

FOR CISTERNS AND WELLS

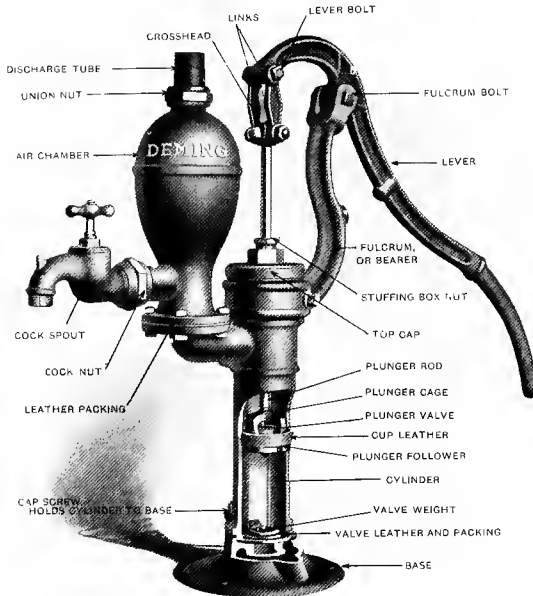
PITCHER SPOUT AND CISTERN
LIFT PUMPS FOR SHALLOW
WELLS AND CISTERNS. HOUSE
FORCE PUMPS FOR HAND USE
IN DOMESTIC WATER
SUPPLY.





A Typical Deming House Force Pump

Fig. 508



(Descriptive Illustration)

The names of the various parts are indicated in the illustration to give dealers and users a general idea of the component parts of pumps shown in this section or chapter of the catalogue. These pumps are complete integral force pumps ready for attaching of suction and discharge tubing.

The pumps designated as house force pumps will satisfactorily lift water by suction a vertical distance of 25 ft. calculated from the surface of the water to the pump cylinder. A reasonable horizontal distance from the water supply to the cylinder does not materially affect the working of the pump, but all pipe connections should be screwed up tight and the horizontal part of suction pipe should always incline a trifle upward toward the pump. This will prevent air pockets, which are troublesome.

With a house force pump water can be lifted and forced to a point above the surface of supply, (called the total lift) from a cistern, well, spring, dam or creek, as given below for various dimensions of cylinder.

Approximate Duty of House Force Pumps (The Leverage Being About 6 to 1)

Diameter of Cylinder Inches	Stroke Inches	Capacity per Stroke Gallons	Will Lift and Force Feet
2	6	.0816	90
2½	6	.1275	75
3	6	.1836	50
3½	8	.3332	35
4	8	.4352	30

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



The Deming "Domestic" Kitchen Pump

With Close Top

For Vertical Suction Lift of 25 Feet

Fig. 102



This is a splendid pump for kitchen use. The close top and large water chamber prevent the water from splashing out at the top. A spout of this type keeps the water from dripping back on the pump stand. The "horn" on the spout provides a means of supporting the bucket. By unscrewing the two bolts in the bearer, the lever can be swung around to the right or left as desired.

The "Domestic" is very durable. It is not expensive and is a staunch and efficient pump for cistern use. The cylinder is iron. On the projecting hub at the bottom of the base, is screwed a coupling nut which is threaded for iron pipe. If specified, a brass tube for soldering to lead pipe will be supplied at extra cost. All parts are made to exact gauges so repairs will always fit.

Furnished, when so ordered, with Brass Valve Seat at extra cost.

Sizes and Prices

Size of Cylinder Inches	Fitted for Pipe Inches	Stroke Inches	Cipher	Price	Weight Pounds
3	1½	4½	ACCURUE	\$5.00	22

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Close Top Pitcher Spout Pump

With Adjustable Lever and Cut-Off Base
For a Vertical Suction Lift of 25 Feet

Fig. 125



This is our Fig. 125 improved pitcher spout pump with close top. It is in universal favor for house use, where a low priced but substantial cistern pump is required. Fig. 125 has a cut-off base so that a bucket or vessel when set under the spout, will catch the water.

The cylinder is polished on a special machine which insures a smooth surface for the plunger and at the same time leaves intact the chilled face of the casting. All parts are made to exact gauges so that repairs will always fit. An iron valve seat is regularly furnished. Brass valve seat instead of iron, will be furnished if desired, but at extra cost.

On the projecting hub at the bottom of the base, is screwed a coupling nut which is threaded for iron pipe. When so ordered, either a brass tube or a galvanized iron tube for soldering to lead pipe, will be furnished, but at extra charge. Fig. 125 is made with either iron or brass-lined cylinder as listed below.

Furnished, when so ordered, with Brass Valve Seat at extra cost.

Quantity, Dimensions and Weights of Fig. 125, Packed for Export

Sizes	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6
Number in Case	25	25	24	16	12	6
Cubic Feet	15	16.2	18.4	15	17.1	12.1
Gross Weights, Pounds	605	685	775	570	570	445

Sizes and Prices

No.	Size Cylinder Inches	Fitted for Pipe Inches	Stroke Inches	IRON		BRASS-LINED CYLINDER		Weight in Pounds
				Cipher	Price	Cipher	Price	
1	2½	1	4	ASSAY	\$ 4.25	ASTOUND	\$ 6.50	22
2	3	1¼	4	ASSAYED	4.75	ASTRAY	7.25	23
3	3½	1½	4	ASSENT	5.25	ASUNDER	8.00	26
4	4	1¾	4	ASSIGN	6.25	ATONING	9.00	31
5	4½	2	5	ASSUAGE	9.50	ATTAIN	12.50	41
6	5	2½	5	ASTOUNDING	17.00	ATTAINED	22.50	61

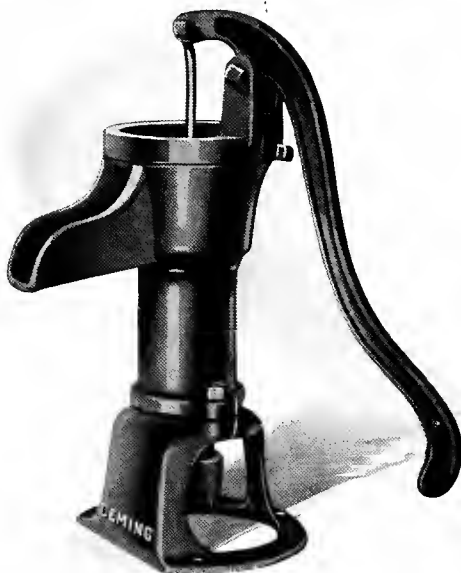
Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Open Top Pitcher Spout Pump

With Adjustable Lever and Cut-Off Base
For Vertical Suction Lift of 25 Feet

Fig. 126



Except for the construction of the top or bearer, this pump is exactly the same as Fig. 125, shown on the preceding page. In Fig. 126 the bearer is open so that the water flows up and out of the spout in full view. If desired the rod may be uncoupled and the plunger drawn out without removing the lever and bearer.

A nut tapped for iron pipe, is screwed on the threaded hub below the base. If it is desired to use lead pipe, we can furnish either a brass soldering tube or a galvanized iron tube at extra cost

All parts are made to exact gauges so repairs will always fit. To prevent freezing, raise the lever to its extreme height to trip valves and allow water to flow back into the well.

Furnished, when so ordered, with Brass Valve Seat at extra cost.

Sizes and Prices

No.	Size of Cylinder Inches	Fitted for Pipe Inches	Stroke Inches	IRON		BRASS-LINED CYLINDER		Weight in Pounds
				Cipher	Price	Cipher	Price	
1	2½	1	4	AUTHOR	\$ 4.25	AVENGING	\$ 6.50	21
2	3	1¾	4	AVAIL	4.75	AVOWED	7.25	22
3	3½	1¾	4	AVAUNT	5.25	AVOWAL	8.00	25
4	4	1½	4	AVENGE	6.25	AWAKE	9.00	30
5	4½	2	5	AVENGED	9.50	AWAKEN	12.50	40
6	5	2½	5	AVENUE	17.00	AWAKENED	22.50	60

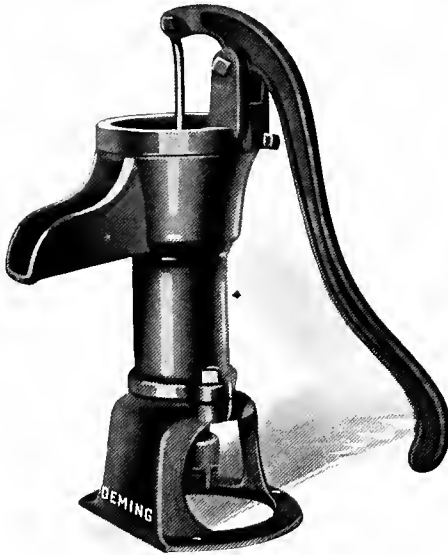
Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



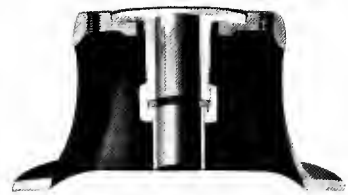
Deming Pitcher Spout Pump ("Smyrna" Pattern)

With Flanged Brass Tube Suction Valve Seat
For Vertical Suction Lift of 25 Feet or Less

Fig. 128



(Base Section) "A"
Base fitted for Pipe



(Base Section) "B"
Base fitted with extra nut and brass tube for soldering to lead pipe.

The construction of the base and the two ways in which it may be fitted are clearly shown by the cross sections, designated as illustrations "A" and "B."

In "A" the base is shown as regularly furnished—threaded for pipe—but lead pipe can be soldered to the threaded brass tube.

In "B" the base is shown with the brass tube threaded for iron pipe, and an extra nut and brass tube for lead pipe.

The extra nut and tube, when lead pipe is used, takes the place of a union coupling.

THE BRASS TUBE SUCTION VALVE SEAT prevents the base from breaking in case of freezing, and for this reason it is much used in certain countries.

The cylinder is polished on a special machine which insures a smooth surface for the plunger and at the same time leaves intact the chilled face of the casting. All parts are made to exact gauges, so that repairs will always fit.

Fig. 128 has a cut off base, so that a bucket or vessel when set under the spout, will catch the water.

Furnished regularly with close top as illustrated, but will be fitted with open top when specified.

Sizes and Prices

No.	Size Cylinder Inches	Fitted for Pipe Inches	Stroke Inches	IRON CYLINDER AS IN "A"		WITH EXTRA NUT AND TUBE IRON CYLINDER AS IN "B"		Weight Pounds
				Cipher	Price	Cipher	Price	
1	2 $\frac{1}{2}$	1	4	ABACA	\$ 4.25	ABELITE	\$ 4.75	22
2	3	1 $\frac{1}{4}$	4	ABACIST	4.75	ABLET	5.25	23
3	3 $\frac{1}{2}$	1 $\frac{1}{4}$	4	ABACK	5.25	ABSOLVE	6.00	26
4	4	1 $\frac{1}{2}$	4	ABAFT	6.25	ABSOLVED	7.00	31
5	4 $\frac{1}{2}$	2	5	ABDAL	9.50	ABSOLVING	11.00	41
6	5	2 $\frac{1}{2}$	5	ABDEST	17.00	ABSENT	19.00	61

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Brass Cylinder Pitcher Spout Pumps

With Close Top and Adjustable Lever
For Vertical Suction Lift of 25 Feet

Fig. 101

Fig. 115



These pumps have the cylinder or stock constructed of SEAMLESS BRASS TUBING which makes them extremely durable. On the projecting hub at the bottom of the base, is screwed a coupling nut which is threaded for iron pipe. If so ordered, a brass tube for soldering to lead pipe will be supplied at extra cost.

Fig. 101 can be furnished with either nickel plated or brass finished cylinder as listed below.

Fig. 115 has all-brass plunger.

The bearers may be set at any angle to the spout. The construction of the bases makes it possible to place a vessel directly beneath the spout.

Wherever a cistern pump of neat appearance and high quality is desired, either Fig. 101 or Fig. 115 will fulfill the requirements in every respect.

Brass Valve Seats are regularly furnished on these pumps.

Figure	Size Cylinder Inches	Fitted for Pipe Inches	Cylinder	Stroke Inches	Weight Pounds	Cipher	Price
101	3	1 3/4	{ Polished Brass } { Nickel Plated }	4	17	ANTIPATHY ANTIGRAPH	\$7.00 8.00
115	3	1 3/4	Polished Brass	4	22	ASSAYER	8.00



Deming Revolving Top Cistern Pump

With Bolted Base and Polished Cylinder For Vertical Suction Lift of 25 Feet

Fig. 120



This cistern pump has the cylinder in the stock and is already to use when connected to pipe. The horizontal distance to the water does not materially affect the efficiency, although a foot valve on the end of the suction pipe will be an advantage when there is no danger from freezing.

To prevent freezing, the lever should be raised to its extreme height, which trips the valves and allows the water to flow back after pumping, when no foot valve is used.

Fig. 120 is a light, compact but very substantial pump and has won especial favor with the export trade. The cylinder is water polished up to the spout, which prevents wear on the pump leather and insures a good suction.

The suction fitting consists regularly of a galvanized malleable tube threaded for pipe attached to hub of base by a union nut. This galvanized tube is suitable for soldering to lead pipe. A special unthreaded galvanized tube for soldering purposes only will be furnished instead at same price when specified. Brass tubes threaded for iron pipe, furnished instead of malleable, when so ordered, at extra price.

The cylinder is bolted to the base. The top is held in place by a set screw so that the lever can be swung around to any desired position.

Brass Valve Seat is regularly furnished on this Pump.

Quantity, Dimensions and Weights of Fig. 120, Packed for Export

Size	1	2	3	4	5	6	8
Number in Case	6	6	6	6	6	6	6
Cubic Feet	4.3	4.8	6	7 $\frac{1}{2}$	9	11.2	12.6
Gross Weights, Pounds	150	180	200	260	280	370	415

Sizes and Prices

No.	Size Cylinder Inches	*Fitted for Pipe Inches	Stroke Inches	IRON		BRASS-LINED CYLINDER		Weight Pounds
				Cipher	Price	Cipher	Price	
1	2 $\frac{1}{4}$	1	5	ABBACY	\$ 4.00	AID	\$ 6.00	18
2	2 $\frac{1}{2}$	1 $\frac{1}{4}$	5	ABBOT	4.50	AIDANT	6.50	23
3	2 $\frac{3}{4}$	1 $\frac{1}{4}$	6	ABBREVIATE	5.00	AIDER	7.25	26
4	3	1 $\frac{1}{2}$	7	ABDICATE	5.50	AIGRE	8.00	34
5	3 $\frac{1}{4}$	1 $\frac{1}{2}$	7	ABDICATION	6.50	AIMER	9.50	42
6	3 $\frac{1}{2}$	2	8	ABDOMEN	8.00	AIMLESS	11.50	51
8	4	2 $\frac{1}{2}$	8	ABDUCE	10.00	AIRING	15.00	56

*For export, when so ordered, we fit these pumps for English pipe thread.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Revolving Top Cistern Pump
 With Wall Brackets and Polished Cylinder
 For Vertical Suction Lift of 25 Feet

Fig. 124



In its working parts Fig. 124 is similar to Fig. 120, shown on the preceding page. However, Fig. 120 is made with two brackets for attaching to wall, which is often found to be convenient. Fig. 124 has no base. Instead, it is fitted with a bottom attachment which is bolted to the cylinder or stock.

All parts are made to exact gauges so that repairs will always fit. *Fig. 124 is regularly furnished with brass valve seat and with galvanized malleable iron tube threaded for iron pipe, connected to the bottom attachment of the pump with a union nut. This galvanized tube is also suitable for soldering to lead pipe, but a special unthreaded galvanized tube for soldering purposes only will be furnished instead, when specified, at same price. Brass tubes, threaded for iron pipe, furnished instead of malleable, when so ordered, at extra price. For export we pack these pumps six in a case. (See opposite page.)*

Sizes and Prices

No.	Size Cylinder Inches	*Fitted for Pipe Inches	Stroke Inches	IRON		BRASS-LINED CYLINDER		Weight Pounds
				Cipher	Price	Cipher	Price	
1	2 1/4	1	5	ADJUTANT	\$ 4.00	ALBUMEN	\$ 6.00	20
2	2 1/2	1 1/4	5	ADJUTOR	4.50	ALBURN	6.50	25
3	2 3/4	1 1/4	6	ADJUTRIX	5.00	ALBURNUS	7.25	28
4	3	1 1/2	7	ADMONISH	5.50	ALCADE	8.00	37
5	3 1/4	1 1/2	7	ADOBE	6.50	ALCAIC	9.50	48
6	3 1/2	2	8	ADONEAN	8.00	ALCANNA	11.50	53
8	4	2 1/2	8	ADONIS	10.00	ALCEDO	15.50	58

*For export, when so ordered, we fit these pumps for English pipe thread.

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



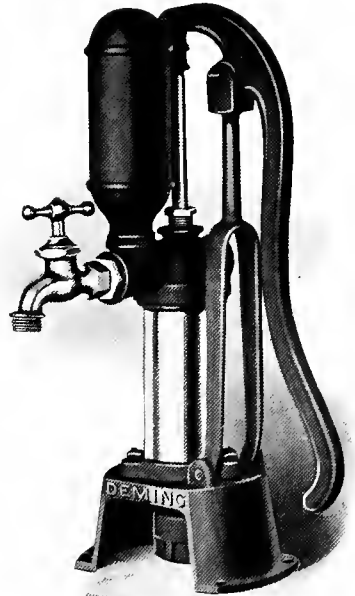
Deming Special Cistern Force Pumps

With Brass Cylinder
Will Lift and Force 50 Feet

Fig. 518



Fig. 519



The above cuts represent a type of our more recent cistern force pumps with Brass cylinder. They will be found useful in elevating water to bathroom, tank or any part of the house by running pipes from the back outlet. We furnish this pump with either plain or cock Spout and with or without air chamber. The long swinging fulcrum which is attached to the base relieves the joints of the Pump from unequal strain common to the ordinary Cistern Force pumps. These pumps can be fitted for lead or iron pipe, but always furnished for iron pipe unless otherwise specified.

In ordering, always state style of spout. For Nickel-plated Cylinders add \$1.00 to list.
Brass Valve Seats are regularly furnished on these pumps.

Sizes and Prices

Fig.	Cylinder Inches	Suction Fitted for Pipe Inches	Stroke Inches	Cipher	Spout	Price	Weight in Pounds
518	3	1 1/4	6	ENDOGEN	Plain	\$ 8.50	20
518	3	1 1/4	6	ENDOCARP	Cock	11.00	20
519	3	1 1/4	6	ENDODERM	Plain	10.00	25
519	3	1 1/4	6	ENFILADE	Cock	12.50	25

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "New Era" Double-Acting House Force Pumps
 With Differential Plunger
 Will Lift and Force from 35 to 50 Feet

Fig. 540



Fig. 544



For house use these are very popular pumps to lift and force water from cisterns and shallow wells where the water is within easy vertical suction distance. If water is to be discharged into an elevated tank, Fig. 544 must be used, because it has a cock spout adapting it especially to this purpose.

The suction plunger below the spout, and the differential plunger above the spout, contribute to make an even discharge. These cylinders are brass lined and the lower cylinder is twice the area of the upper.

On the projecting hub at the bottom of the base, is screwed a coupling nut which is threaded for iron pipe. When so ordered a brass tube or galvanized iron tube for soldering to lead pipe, will be furnished at additional cost.

The spouts are threaded for 3/4-inch hose coupling. The back outlet is tapped for 1-inch pipe. The bearers are adjustable so the levers can be turned at any angle with the spout. By removing the brass plug in the air chamber, Figs. 540 and 544 may be converted into lift pumps.

Brass Valve Seats are regularly furnished on these pumps.

Sizes and Prices

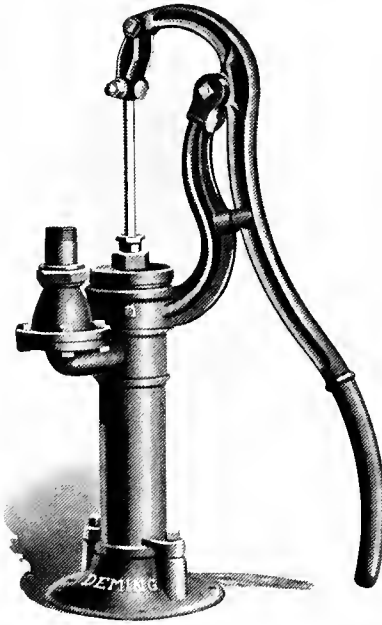
Fig.	No.	Diameter Cylinder	Suction Fitted for Pipe Inches	Stroke Inches	BRASS-LINED CYLINDER		Weight Pounds
					Cipher	Price	
540	4	3	1 1/4	3 1/2	EARLESS	\$ 8.50	30
540	6	3 1/2	1 1/2	3 1/2	EARLOCK	10.00	35
544	4	3	1 1/4	3 1/2	EAGLESS	10.50	32
544	6	3 1/2	1 1/2	3 1/2	EARWIG	12.00	37

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Hand Force Pump on Base
 With Brass Cased Piston Rod and Adjustable Lever
 Will Lift and Force 30 to 90 Feet

Fig. 502



The cylinder or working barrel of Fig. 502 is in the stock of the pump. It is provided with a substantial base, brass cased piston rod and brass stuffing box gland.

The discharge of Fig. 502 is fitted with a galvanized malleable iron tube threaded for iron pipe, this tube being attached to the discharge funnel with a coupling nut.

All parts are made to exact gauges, and repairs therefore, will always fit. To prevent freezing, the lever should be raised to its extreme height which trips the valves and allows the water to escape from the cylinder.

The bearer is adjustable so the lever can be placed at any angle with the spout.

Brass Valve Seat is regularly furnished on this pump.

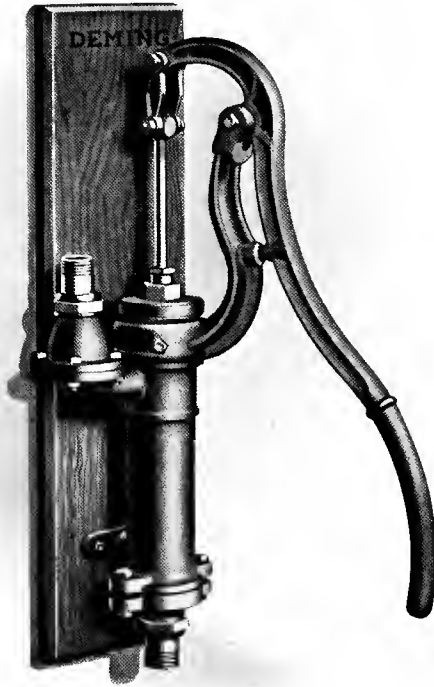
Sizes and Prices

No.	Size Cylinder Inches	Suction and Discharge Fitted for Pipe, Inches	Will Lift and Force Feet	Stroke Inches	IRON		BRASS LINED		Weight in Pounds
					Cipher	Price	Cipher	Price	
0	2	1 1/4	90	6	EAGER	\$ 9.00	ECHINITE	\$11.50	48
2	2 1/2	1 1/4	75	6	EAGERLY	9.50	EDITORIAL	12.00	49
4	3	1 1/4	50	6	EARLDON	11.00	EFFRONT	13.50	52
6	3 1/2	1 1/2	35	8	EARNEST	17.00	ELEPHANT	20.50	63
8	4	2 suc. x 1 1/2 dis.	30	8	EARNESTLY	18.00	EMBATTLE	23.00	65

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Hand Force Pump on Plank
 With Brass Cased Piston Rod
 Will Lift and Force 30 to 90 Feet
 Fig. 503



The pump here illustrated is in every respect similar to Fig. 502, shown on the opposite page, except that it is provided with brackets for attaching to a plank or wall.

The discharge of Fig. 503 is fitted with a galvanized malleable iron tube threaded for iron pipe, this tube being attached to the discharge funnel with a coupling nut.

A galvanized malleable iron tube threaded for iron pipe is regularly furnished on the suction, this being connected to the bottom attachment of the pump with a union nut. These galvanized tubes are also suitable for soldering to lead pipe, but special unthreaded galvanized tubes for soldering purposes only will also be furnished when desired at extra price.

To prevent freezing, raise the lever to its extreme height.
 If the plank is not wanted, deduct \$1.00 list.

Brass Valve Seat is regularly furnished on this pump.

Sizes and Prices

No.	Size Cylinder Inches	Suction and Discharge Fitted for Pipe Inches	Stroke Inches	IRON		BRASS LINED		Weight in Pounds
				Cipher	Price	Cipher	Price	
0	2	1 1/4	6	EBRIOUS	\$10.00	EMBROIL	\$12.50	55
2	2 1/2	1 1/4	6	EBULITION	10.50	EMPALE	13.00	55
4	3	1 1/4	6	ECCENTRIC	12.00	EMULGENT	14.50	58
6	3 1/2	1 1/2	8	ECCLESIAST	18.00	ENCOUNTER	21.50	65
8	4	2 suc. x 1 1/2 dis.	8	ECHINUS	19.00	ENLOCK	24.00	66

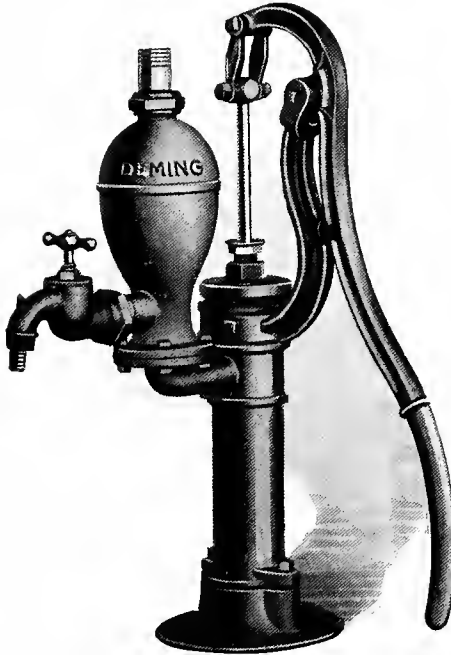
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Deming Hand Force Pump on Base

With Cock Spout and Air Chamber
Will Lift and Force 30 to 90 Feet

Fig. 508



This is an extremely popular pump. It has an air chamber and cock spout on the side discharge. The upward discharge is supplied with a union nut and galvanized malleable iron tube threaded for pipe as listed.

The base is tapped for iron suction pipe. All parts are made to exact gauges and repairs will always fit.

The bearer is adjustable to any angle with the spout. The bolt holes in the air chamber are so spaced that the spout can be turned 90 degrees in either direction.

To prevent freezing, raise the lever to extreme height.

If upward discharge ONLY is to be used, deduct \$2.50 for cock spout from list price.

Brass Valve Seat is regularly furnished on this pump.

Sizes and Prices

No.	Size Cylinder Inches	Suction and Discharge Fitted for Pipe Inches	Stroke Inches	IRON		BRASS LINED		Weight in Pounds
				Cipher	Price	Cipher	Price	
0	2	1 1/4	6	ELFIN	\$12.00	EMBAY	\$14.50	60
2	2 1/2	1 1/4	6	ELFISH	12.50	EMBREW	15.00	60
4	3	1 1/4	6	ELICIT	14.50	EMBROGLIO	17.00	64
6	3 1/2	1 1/2	8	ELICITED	21.50	EMBRYO	25.00	83
8	4	2 suc. x 1 1/2 dis.	8	ELIDE	22.50	EMOLUMENT	27.50	85

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Hand Force Pump on Plank
 With Cock Spout and Upward Discharge
 Will Lift and Force 30 to 90 Feet

Fig. 509



The pump here illustrated is in every respect similar to Fig. 508, shown on opposite page, except that it is provided with brackets for attaching to plank or wall.

The upward discharge is supplied with a union nut and galvanized malleable iron tube threaded for pipe as listed.

A galvanized malleable iron tube threaded for iron pipe is regularly furnished on the suction, this being connected to the bottom attachment of the pump with a union nut. The galvanized tubes are also suitable for soldering to lead pipe, but special unthreaded galvanized tubes for soldering purposes only will also be furnished when desired at extra price.

The bolt holes in the air chamber are so spaced that the spout can be turned 90 degrees in either direction. All parts are made to exact gauges so that repairs will always fit.

Should the plank not be desired, deduct \$1.00 list.

If cock spout is not desired, deduct \$2.50 from list price.

Brass Valve Seat is regularly furnished on this pump.

Sizes and Prices

No.	Size Cylinder Inches	Suction and Discharge Fitted for Pipe, Inches	Will Lift and Force Feet	Stroke Inches	IRON		BRASS LINED		Weight in Pounds
					Cipher	Price	Cipher	Price	
0	2	1 1/4	90	6	ELOPE	\$13.00	ENATE	\$15.50	69
2	2 1/2	1 1/4	75	6	ELOPEMENT	13.50	ENCHISEL	16.00	69
4	3	1 1/4	50	6	ELOQUENCE	15.50	ENCHASE	18.00	72
6	3 1/2	1 1/2	35	8	ELOQUENT	22.50	ENCLOISTER	26.00	89
8	4	2 suc. x 1 1/2 dis.	30	8	ELUCIDATE	23.50	ENCRINAL	28.50	93

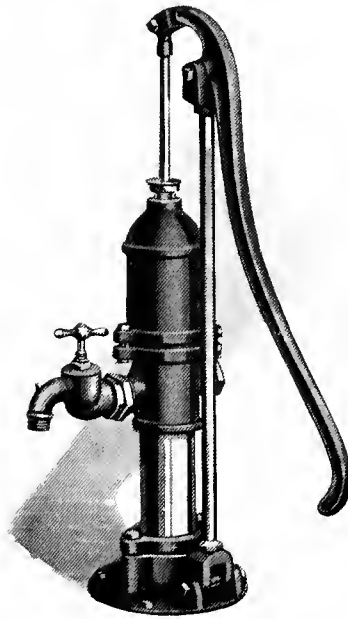
Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming "Blue Special" House Force Pump

With Brass Tube Cylinder
Will Lift and Force 50 Feet

Fig. 516



This is one of our latest and best designed pumps for house use. It has a long swinging fulcrum which puts on the base, all the strain of pumping. The suction pipe screws into the base. This type of bolted base is very convenient to install and makes the suction valve easy of access when the cylinder is removed from the base.

Fig. 516 has brass tube cylinder and large air chamber, also compression bibb cock and a back outlet tapped for one inch pipe. The plunger rod is brass cased and operates through a brass stuffing box gland. Fig. 516 is painted blue and gold and presents a very neat appearance. The unusually long lever makes pumping easy.

Brass Valve Seat is regularly furnished on this pump.

Sizes and Prices

Size Cylinder Inches	Suction Fitted for Pipe Inches	Back Outlet Fitted for Pipe	Stroke Inches	Cipher	Price	Weight in Pounds
3	1 1/4	1 Inch	6	EXPLODE	\$10.00	40

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Windmill Force Pumps on Base

With Air Chamber and Cock Spout
Will Lift and Force 30 to 75 Feet

Fig. 430



Fig. 1430

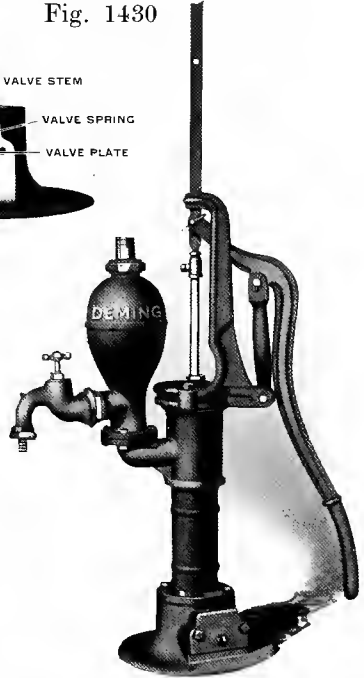
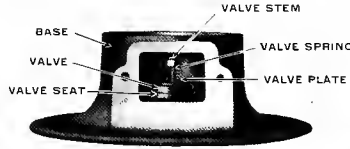


Fig. 430 is a very heavy pump which may be used in connection with a windmill. It is also arranged for operation by hand. The base is tapped for iron suction pipe and is bolted to the stock. The air chamber is provided with an upward discharge.

When used in cold climates, freezing may be prevented by raising the lever to its extreme height which trips the valves and allows the water to escape from the cylinder. The working barrel or cylinder is located in the stock.

Fig. 430 has brass valve seat, brass cased piston rod and a cock spout threaded for hose. The bolt holes in the air chamber are so spaced that the spout can be turned 90 degrees either way. The bearer is also adjustable.

Fig. 1430 is similar to Fig. 430 except that it has a hand-hole in the base, giving easy access to the suction valve for examination or repairs.

Deduct \$2.50 from list price if cap nut on side discharge is wanted instead of cock spout. Brass Valve Seats are regularly furnished on these pumps.

Sizes and Prices

Fig.	No.	Size Cylinder Inches	Suction and Discharge Fitted for Pipe, Inches	Will Lift and Force Feet	Stroke Inches	IRON		BRASS LINED		Weight in Pounds
						Cipher	Price	Cipher	Price	
430	2	2½	1¼	75	6	ENRAPTURE	\$15.50	ENDARK	\$18.00	78
430	4	3	1¼	50	6	ENRICH	16.00	ENDIVE	18.50	78
430	6	3½	1½	35	8	ENRICHED	23.00	ENDOSS	26.50	100
430	8	4	2	30	8	ENROBE	24.50	ENDURE	29.50	105
1430	2	2½	1¼	75	6	ENMESH	16.50	ENOUNCE	19.00	78
1430	4	3	1¼	50	6	ENMEV	17.00	ENRIDGE	19.50	78
1430	6	3½	1½	35	8	ENODE	24.00	ENROOT	27.50	100
1430	8	4	2	30	8	ENDMOTY	25.50	ENSAFE	30.50	105

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Deming "New York" Brass House Force Pumps

Mounted on Iron Frame
Will Lift and Force 90 Feet

Fig. 548

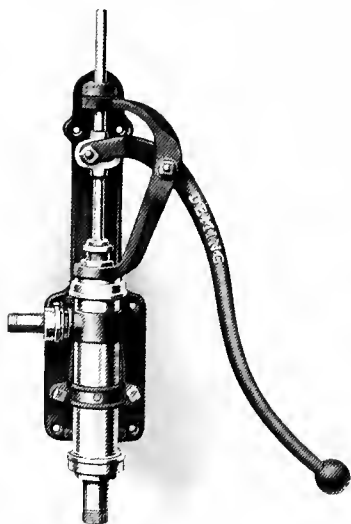


Fig. 559



For use in yacht galleys and residence kitchens, these pumps are unexcelled. They are also used in flat and tenement buildings to carry water to upper stories where the city water pressure is not sufficient. Usually they are connected to the regular plumbing system.

Fig. 548 has a swinging lever fulcrum and may be operated at any angle from the pump without removing nut or bolts. Fig. 559 has an adjustable fulcrum and may be used either right or left handed.

The plunger can be withdrawn by removing the top cap, without disturbing the pipe connections. Both of these pumps as listed are regularly fitted for iron pipe, but may be fitted for lead pipe when so ordered.

Sizes and Prices

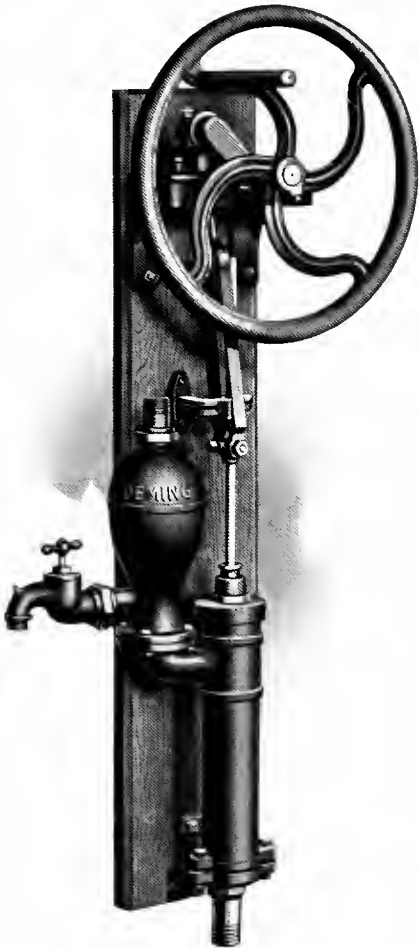
Fig.	Size of Cylinder Inches	Suction Fitted for Pipe Inches	Discharge Fitted for Pipe Inches	Cipher	Price	Weight in Pounds
548	2	1	$\frac{3}{4}$	EXCHEQUER	\$10.00	19
559	2	1	$\frac{3}{4}$	EXCEEDING	14.00	20

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Deming House Force Pump on Plank
 With Fly-Wheel and Crank
 Will Lift and Force 35 to 75 Feet

Fig. 523



This pump is firmly bolted to the wall plank. The spout can be set at different angles by removing the bolts in the base of the air chamber.

The fly-wheel is 20 inches in diameter and will be found of great assistance in pumping large quantities of water.

The plunger rod is brass cased and operates through a brass stuffing box gland.

The upward discharge is supplied with a union nut and galvanized malleable iron tube threaded for pipe as listed.

A galvanized malleable iron tube threaded for iron pipe is regularly furnished on the suction, this being connected to the bottom attachment of the pump with a union nut. These galvanized tubes are also suitable for soldering to lead pipe. A special unthreaded galvanized tube for soldering purposes only will be furnished instead, when desired, at same price. Brass tubes, threaded for iron pipe, furnished instead of malleable, at extra price when so ordered.

The plank on which the pump is mounted is nicely finished in natural wood. Deduct \$1.00 from list price if plank is not desired.

If cock spout is not desired, deduct \$2.50 from list price.

Brass Valve Seat is regularly furnished on this pump

Sizes and Prices

No.	Diam. Cyl. Inches	Stroke Inches	Capacity per Stroke Gallons	Will Lift and Force Feet	Suction Inches	Upward Discharge	Weight in Pounds	IRON CYLINDER		BRASS-LINED CYLINDER	
								Cipher	Price	Cipher	Price
2	2½	6	.127	75	1¼	1¼	135	EROSE	\$31.50	ENTREATY	\$34.00
4	3	6	.183	50	1¼	1¼	165	EROSIVE	37.00	ENTREE	40.50
6	3½	6	.249	30	1½	1½	175	EROSTENE	45.00	ENTRENCH	49.50

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Deming House Force Pump on Plank With Upward Discharge Will Lift and Force 35 to 75 Feet

Fig. 520



Fig. 520 has a brass cased piston rod with pitman and rod guide, and long lever. The lever is furnished for either right or left hand, but is always arranged right handed, as illustrated, unless otherwise ordered.

All parts are made to exact gauges so that repairs will always fit.

The discharge of Fig. 520 is fitted with a galvanized malleable iron tube threaded for iron pipe, this tube being attached to the discharge funnel with a coupling nut.

A galvanized malleable iron tube threaded for iron pipe is regularly furnished on the suction, this being connected to the bottom attachment of the pump with a union nut. These galvanized tubes are also suitable for soldering to lead pipe. A special unthreaded galvanized tube for soldering purposes only will be furnished instead, when desired, at same price. Brass tubes threaded for iron pipe, furnished instead of malleable, when so ordered, at extra price.

Fig. 520 is regularly mounted on a handsome plank and presents a very fine appearance. If this plank is not desired, deduct \$1.00 list.

Brass Valve Seat is regularly furnished on this pump.

Sizes and Prices

No.	Size Cylinder Inches	Suction and Discharge Fitted for Pipe. Inches	Will Lift and Force. Feet	Stroke Inches	IRON		BRASS LINED		Weight in Pounds
					Cipher	Price	Cipher	Price	
2	2½	1½	75	7	EPIDEMIC	\$15.50	ENVUNE	\$18.00	95
3	2¾	1¾	65	7	EPIDERMAL	16.00	ENTUNED	19.00	100
4	3	1¾	50	7	EPIDEMY	16.50	ENURE	20.00	100
5	3¼	1½	40	7	EPIGENE	20.00	ENVIE	23.50	104
6	3½	1½	35	7	EPIGRAM	22.00	ENVVAULT	26.50	105

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Deming House Force Pump on Plank

With Air Chamber and Cock Spout
Will Lift and Force 35 to 75 Feet

Fig. 524



In all respects this is the same pump as Fig. 520, except that an air chamber and cock spout have been added. The bolt holes in the air chamber are so spaced that the spout can be turned 90 degrees.

The upward discharge is supplied with a union nut and galvanized malleable iron tube threaded for pipe as listed.

A galvanized malleable iron tube is regularly furnished on the suction, this tube being connected to the bottom attachment of the pump, with a union nut. These galvanized tubes are also suitable for soldering to lead pipe. A special unthreaded galvanized tube for soldering purposes only will be furnished when desired, at same price. Brass tubes, threaded for iron pipe, furnished instead of malleable, when so ordered, at extra price.

All parts are made to exact gauges so that repairs will always fit.

Should plank not be desired, deduct \$1.00 list.

Deduct \$2.50 from list price if cock spout is not wanted.

Brass Valve Seat is regularly furnished on this pump.

Sizes and Prices

o.	Size Cylinder Inches	Suction and Discharge Fitted for Pipe. Inches	Stroke Inches	Will Lift and Force. Feet	IRON		BRASS LINED		Weight in Pounds
					Cipher	Price	Cipher	Price	
2	2 1/2	1 1/4	7	75	ERECTOR	\$30.00	ENVY	\$22.50	109
3	2 3/4	1 1/4	7	65	ERECTOR	20.50	ENVY	23.50	110
4	3	1 1/4	7	50	ERECTOR	21.00	ENVY	24.50	114
5	3 1/4	1 1/2	7	40	ERECTOR	24.50	ENVY	29.00	114
6	3 1/2	1 1/2	7	35	ERECTOR	28.00	ENVY	32.50	115

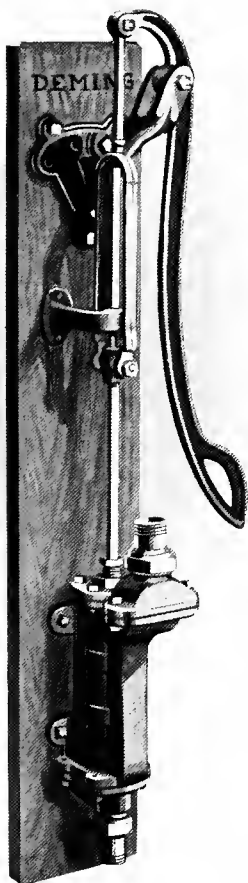
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Deming Double-Acting House Force Pump on Plank

With Upward Discharge
Will Lift and Force 30 to 75 Feet

Fig. 541



Where a continuous stream of water is required, this will be found a most desirable pump. It is mounted on a plank and has a reversible lever and fulcrum, so that it can be changed from right to left hand.

The discharge is fitted with a galvanized malleable iron tube threaded for iron pipe, this tube being attached to the discharge funnel with a coupling nut.

Fig. 541 has a brass cased piston rod, brass stuffing box gland, and is furnished with pitman, rod guide and long lever. Fig. 541 discharges water on each stroke.

A galvanized malleable iron tube threaded for iron pipe is regularly furnished on the suction, this being connected to the bottom attachment of the pump with a union nut. These galvanized tubes are also suitable for soldering to lead pipe. A special unthreaded galvanized tube for soldering purposes only will be furnished instead, when desired, at same price. Brass tubes, threaded for iron pipe, furnished instead of malleable, when so ordered, at extra price.

If plank is not wanted, deduct \$1.00 from list price.

Sizes and Prices

No.	Size Cylinder Inches	Suction and Discharge Fitted for Pipe, Inches	Will Lift and Force, Inches	Stroke Inches	IRON		BRASS LINED		Weight in Pounds
					Cipher	Price	Cipher	Price	
2	2½	1¼	75	7	ESCHEW	\$17.00	EOCENE	\$19.50	105
4	3	1½	50	7	ESCORT	21.00	EOLIC	24.50	110
6	3½	1½	35	7	ESCRITOIRE	25.00	ESSAY	29.50	118
8	4	2	30	7	ESPIONAGE	37.00	ESSAYED	42.50	180

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How to Install Deming House Lift and Force Pumps

Shown on the Preceding Pages



Typical Installation showing well a horizontal distance from pump suction distance does not exceed 25 feet. This is illustrated by the "Typical Installation" in which the water is drawn vertically from the well, then horizontally to a point beneath the pump, and again vertically into the pump cylinder which is located in the stock or body of the pump. When the suction pipe is laid horizontally, it should be placed underground a distance of three feet to prevent freezing, and the pipe leading vertically to the pump should be carefully boxed in for the same reason.

Where the water is more than 25 feet below the pump, Deming Set-Length Pumps, with additional pipe, or Deming Well Pump Standards should be used — See the following sections.

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Before placing the pump in working position, it is best to soak the stock in water for an hour or so. This will expand the cup leather and cause it to fit the walls of the cylinder more snugly. The pump should always rest firmly on the well curb or platform, and should not be supported by the suction pipe. The lower end of the suction pipe should never be permitted to touch the bottom of the well.

The pump always works easier after a few days' use. If the plunger leathers should be thick, the pump may work hard and stiff at first. It is almost impossible to adjust leathers exactly right at the factory because of the difference in expansion and thickness of the leathers.

All pipe joints should be well threaded and screwed together snugly so as to secure a perfect suction. The connecting rod in deep well pumps should be well threaded and screwed together tightly to make good, strong joints.

If a bucket of water is held to the spout and the handle is worked rapidly, the pump will prime itself.

It is possible to draw water horizontally any reasonable distance, provided the vertical



Deming Double-Acting House Force Pump on Plank

With Air Chamber and Cock Spout
Will Lift and Force 30 to 75 Feet

Fig. 542



This is the same pump as Fig. 541 described on the opposite page, but with addition of air chamber and cock spout.

A galvanized malleable iron tube threaded for iron pipe is regularly furnished, on the suction, this being connected to the bottom attachment of the pump with a union nut. The upward discharge is supplied with a union nut and galvanized malleable iron tube threaded for pipe as listed. These galvanized tubes are also suitable for soldering to lead pipe. Special unthreaded galvanized tubes for soldering purposes only will be furnished instead, when desired, at same price. Brass tubes, threaded for iron pipe, furnished instead of malleable, when so ordered, at extra price.

If the plank is not desired, deduct \$1.00 from the list.

Deduct \$2.50 from list price if cock spout is not wanted.

Sizes and Prices

No.	Size Cylinder Inches	Suction and Discharge Fitted for Pipe, Inches	Stroke Inches	Will Lift and Force, Inches	IRON		BRASS LINED		Weight in Pounds
					Cipher	Price	Cipher	Price	
2	2½	1¼	7	75	ETHICAL	\$21.50	ETHERINE	\$24.00	120
4	3	1½	7	50	ETHICS	25.50	ETHER	29.00	125
6	3½	1½	7	35	ENTHNOLOGY	31.00	ETERN	35.50	145
8	4	2	7	30	ETIQUETTE	45.00	ETHNIC	50.00	200

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SET-LENGTH LIFT

AND

FORCE PUMPS

FOR HAND AND WINDMILL

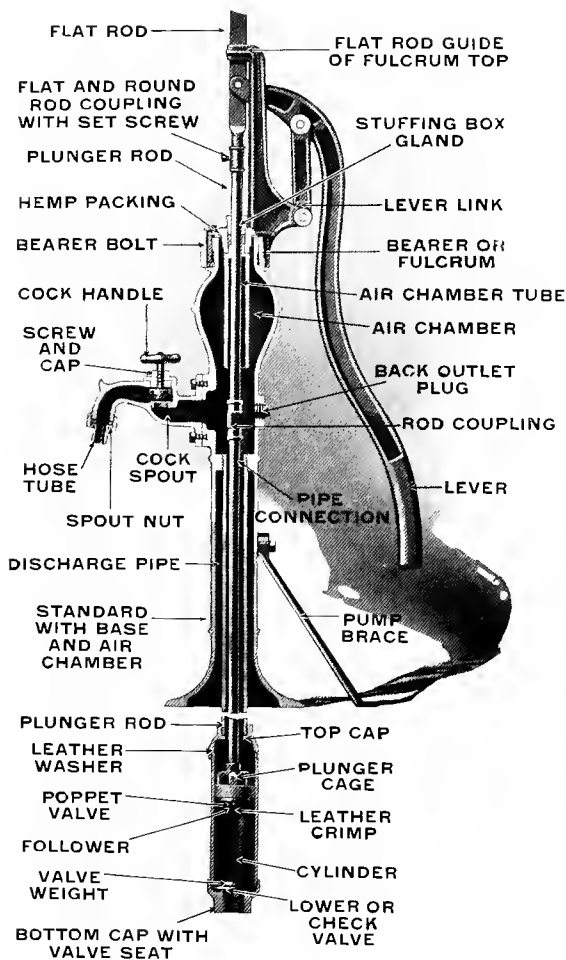
NON-FREEZING OUTDOOR
PUMPS FOR SHALLOW WELLS
AND CISTERNS. COMPLETE LIFT
AND FORCE PUMPS FOR HAND
AND WINDMILL USE WITH
THREE-FOOT SET-LENGTH
BETWEEN STANDARD
AND CYLINDER





A Typical Deming Set Length Force Pump

Fig. 442 (In Section)



Approximate Sizes of Cylinders for Hand and Windmill Pumps

Depth of Well in Feet (This Depth or Less)	25	50	75	100	150	200
Diameter of Cylinder in Inches (This Size or Less)	3½	3	2½	2¼	2	1¾
Diameter of Suction and Discharge in Inches (This Size or Greater)	1½	1¼	1¼	1¼	1	1

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Set Length Lift and Force Pumps Suggestions For Installing Them

Any pump stock which is provided with an independent cylinder and sufficient pipe to place the top of the cylinder three feet below the base of the pump, is known as a "Set Length pump." By the use of this fixed set length, the cylinder is brought below the frost line. All the pumps illustrated in this section are furnished with a three-foot set length and a cylinder.

To prevent freezing, we drill a small hole in the set length pipe just above the cylinder, which permits the water to drain out of the pipe after pumping. Care should be taken that this drip hole does not become clogged while the pump is being installed.

The set length pump is intended for use in wells 28 feet deep or less or in any place where the vertical suction lift does not exceed 25 feet. A set length pump is very easy to install since it is necessary only to screw sufficient pipe into the lower end of the cylinder to reach to the bottom of a well. However, the distance from the bottom of the cylinder to the surface of the water should not be greater than 25 feet. All pipe joints should be well threaded and screwed up tight. The weight of the pump and pipe should be carried by the well platform or curb, and not upon the suction pipe, as the suction pipe should never rest upon the bottom of the well. When the pump is to be used in a shallow well, it is advisable to soak the cylinder in water for an hour or so. This will cause the plunger leathers to swell and fit more snugly the walls of the cylinder.

By lengthening the pipe and lowering the cylinder into or near the water, this type of pump may be used in wells up to 200 feet deep, depending upon the size of the cylinder and the construction of the pump. For instance, it is not advisable to use Figs. 198, 199, 182, 166 and other light weight pumps shown in this section in wells more than 50 feet deep, while the heavier pumps with longer levers, such as Figs. 210, 213, 290, 219, 442, the "Peerless" Pumps, etc., may be used in wells of much greater depth.

We recommend that a foot valve be placed on the end of the suction pipe if the cylinder cannot be submerged. The foot valve will keep the cylinder and the pipe below the cylinder, full of water at all times, so that the pump will require no priming. However, if the cylinder can be placed in the water, the pump will always be primed and a foot valve will not be necessary. We advise that the cylinder be submerged wherever possible.

On the succeeding pages are described lift and force pumps with cast iron stocks; pipe stocks and adjustable bases; hand, windmill and cog lever tops. The table on opposite page showing the size cylinder which should be used in wells up to 200 feet, will be found useful when figuring a pump installation.

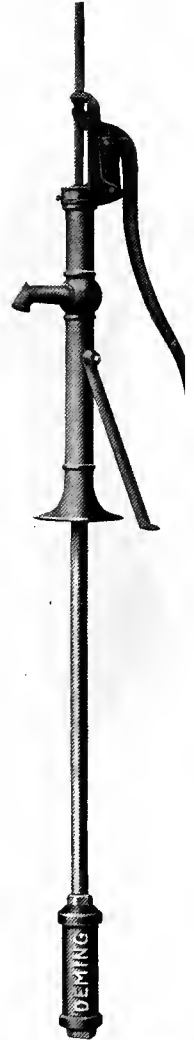
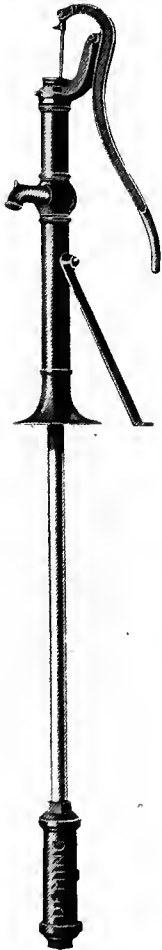


Deming Special Anti-Freezing Lift Pumps

With Set Length Connected Under Spout
For Wells 28 Feet Deep or Less

Fig. 398
Windmill Top

Fig. 198
Open Top



These are the lightest pattern of set length pumps which we manufacture. They are extremely popular and have for many years been favorites with dealers and users. We have made thousands of them.

By lengthening the pipe and lowering the cylinders into the water, this type of pump can be used in wells 50 feet deep or less, with very satisfactory results.

Fig. 398 has the same standard and set length as Fig. 198; the only difference between the two pumps is that Fig. 398 has revolving windmill top instead of hand top.

A drip hole in the set length pipe three feet below base, allows the water to flow back into the well and prevents freezing.

Brass Valve Seats are regularly furnished on these pumps.

Sizes and Prices

Fig.	No.	Size of Cylinder Inches	Fitted for Pipe Inches	WITH IRON CYLINDER		WITH BRASS-LINED CYLINDER		Weight in Pounds
				Cipher	Price	Cipher	Price	
198	2	2 1/2	1 1/4	BRAZENLY	\$7.50	BLANCHING	\$10.00	56
198	4	3	1 1/4	BREACH	8.00	BLANCARD	10.50	60
398	2	2 1/2	1 1/4	BUTLER	8.50	BLASTING	11.00	63
398	4	3	1 1/4	BUTMENT	9.00	BLASTED	11.50	69

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Special Open Top Hand Lift Pump

With Cog Lever Top and Guarded Gear
For Wells 28 Feet Deep or Less

Fig. 298
Hand Top



This is the same standard as Fig. 198, on opposite page, but is fitted with cog lever top for hand operation. It makes a very light but serviceable cog-lever pump which we are able to sell at a low price. Fig. 298 is the simplest form of COG LEVER set length lift pump.

As illustrated, Fig. 298 is adapted for wells 28 feet deep or less; but if the pipe is lengthened and the cylinder lowered into or near the water, it may be used in wells 50 feet deep or less with very satisfactory results.

We construct this pump so that the plunger rod is given a direct vertical motion and will not get out of line, which makes it very easy to operate.

The gear guards afford absolute protection from the gears, which are entirely enclosed by the guards.

A drip hole in the set length pipe, three feet below the base, allows the water to flow back into the well and prevents freezing.

Brass Valve Seat is regularly furnished on this pump.

Sizes and Prices

Fig.	No.	Size of Cylinder Inches	Fitted for Pipe Inches	WITH IRON CYLINDER		WITH BRASS-LINED CYLINDER		Weight in Pounds
				Cipher	Price	Cipher	Price	
298	4	3	1 1/4	BROACH	\$10.00	BURGOO	\$12.50	68

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Special Well Hand Lift Pump With Revolving Bearers For Wells 28 Feet Deep or Less

Fig. 166
Open Top



FIG. 166 "NEW MODEL" has a large spout casting which provides a receptacle of sufficient size to prevent the water from spurting out at the top. The curved siphon spout insures a uniform discharge. A heavy split base is furnished, so that a brace is not needed. The bearer can be set at any angle to the spout, and the base being adjustable, permits the standard to be any desired height. The stock is 1 1/4 inch pipe. By dropping the cylinder down, this pump is good for wells 50 feet deep or less.

Fig. 199
Tight Top

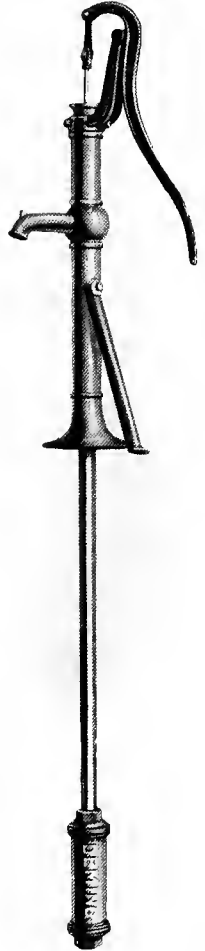


FIG. 199 TIGHT TOP LIFT PUMP is a light pattern set length pump. In designing it, considerable care has been taken to so distribute the metal that strength and durability are retained. A drip hole in the set length pipe, three feet below the base allows the water to flow back into the well and prevents freezing. This pump has the same standard as Fig. 198.

As illustrated, these pumps are adapted for use in wells 28 feet deep or less, but if the pipe is lengthened and the cylinder lowered into or near the water, they may be used in wells 50 feet deep or less with very satisfactory results.

The tight top prevents obstructions from being thrown into the pump, and also gives the plunger rod a direct vertical motion.

Brass Valve Seats are regularly furnished on these pumps.

Sizes and Prices

Fig.	No.	Size Cylinder Inches	Fitted For Pipe Inches	Stroke Inches	WITH IRON CYLINDER		WITH BRASS-LINED CYLINDER		Weight in Pounds
					Cipher	Price	Cipher	Price	
166	4	3	1 1/4	6	BANDON	\$8.00	BANDY	\$10.50	59
199	2	2 1/2	1 1/4	6	BREADED	8.50	BANE	11.00	58
199	4	3	1 1/4	6	BREAKER	8.75	BANEFUL	11.25	62

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Special Well Hand Lift and Force Pumps

With Adjustable Brace and Base
For Wells 28 Feet Deep or Less

Fig. 183
Lift Pump

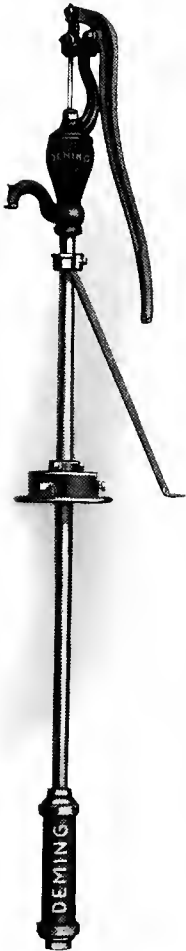
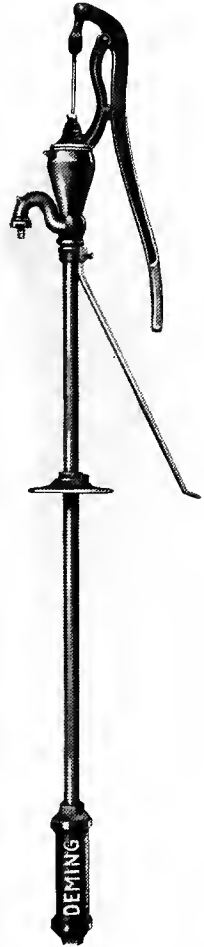


Fig. 185
Force Pump



Each of these pumps has an adjustable base and brace, permitting the standard to be any desired height. They can be used in either open or drilled wells. The curved siphon spouts insure a uniform discharge.

Fig. 183 will lift water a distance of 28 feet. It has a cup shaped base which will fit over the top of any size casing up to six inches in diameter.

Each of these pumps will lift water 50 feet if the cylinder is dropped down into the water. Fig. 185 is a very good light weight FORCE pump and is extremely popular.

The standards and set lengths of Figs. 183 and 185 are constructed of 1¼-inch pipe. Fig. 185 is fitted with a hose tube and nut.

A drip hole in the set length pipe three feet below the base allows the water to flow back into the well and prevents freezing.

Brass Valve Seats are regularly furnished on these pumps.

Sizes and Prices

Fig.	No.	Size Cylinder Inches	Fitted For Pipe Inches	Stroke Inches	WITH IRON CYLINDER		WITH BRASS-LINED CYLINDER		Weight in Pounds
					Cipher	Price	Cipher	Price	
183	4	3	1¼	6	BEZAN	\$ 9.00	BEZANTLER	\$11.50	62
185	4	3	1¼	6	BITTER	11.00	BITTEN	13.50	62

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Improved Non-Freezing Hand Lift Pumps

With Open Top
For Wells 28 Feet Deep or Less

Fig. 210
Light Standard



Fig. 211
Medium Standard



Fig. 212
Heavy Standard



Description and Lists of these Pumps will be found on the opposite page.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



HAND AND POWER PUMPS FOR ALL USES



Deming Improved Non-Freezing Hand Lift Pumps

With Open Top
For Wells 28 Feet Deep or Less

Figs. 210, 211 and 212

The pumps illustrated on the opposite page are similar in design, the only difference being in the sizes and weights of the standards.

As listed they may be used in wells about 28 feet deep. If the cylinders are lowered into or near the water, they may be used in wells 50 to 75 feet deep, depending upon the size of the cylinder — see table on page 34.

These bases are cast solid on the stock, and set length pipes are connected under the spout, thus causing delivery of the water after a few strokes of the handle. A drip hole in the set length pipe, three feet below the base, allows the water to flow back and prevents freezing. They may be used in both open and driven wells. Length of stroke is six inches.

Brass Valve Seats are regularly furnished on these pumps.

Sizes and Prices, With Iron Cylinders

SIZES AND FITTINGS			FIG. 210 Height 44 In. Base to Top		FIG. 211 Height 45 In. Base to Top		FIG. 212 Height 47 In. Base to Base	
No.	Size Cylinder Inches	Fitted for Pipe Inches	Cipher	Price	Cipher	Price	Cipher	Price
2	2½	1¼	BEDDED	\$8.00	BEGRUDGE	\$ 8.50	.....	.....
4	3	1¼	BEETLE	8.50	BEMOAN	9.00	BESEECH	\$ 9.50
6	3½	1½	BEEVE	9.50	BEQUEST	10.00	BETIDE	10.50
8	4	2	.....	.....	BEQUOTE	11.50	BETOKEN	12.00

Sizes and Prices, With Brass Lined Cylinders

SIZES AND FITTINGS			FIG. 210 Height 44 In. Base to Top		FIG. 211 Height 45 In. Base to Top		FIG. 212 Height 47 In. Base to Top	
No.	Size Cylinder Inches	Fitted for Pipe Inches	Cipher	Price	Cipher	Price	Cipher	Price
2	2½	1¼	BETROHAL	\$10.50	BIGTRY	\$11.00	.....	.....
4	3	1¼	BEWITCHED	11.00	BILLIARDS	11.50	BISON	\$12.00
6	3½	1½	BEWITS	12.50	BIRTHDAY	13.00	BLACKING	13.50
8	4	2	.....	.....	BIRTHING	15.00	BLAME	15.50

Weights in Pounds of Figs. 210, 211 and 212

No.	Fig. 210	Fig. 211	Fig. 212	No.	Fig. 210	Fig. 211	Fig. 212
2	70	72	..	6	77	82	90
4	73	77	86	8	..	90	98

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



THE DEMING COMPANY, SALEM, OHIO, U. S. A.



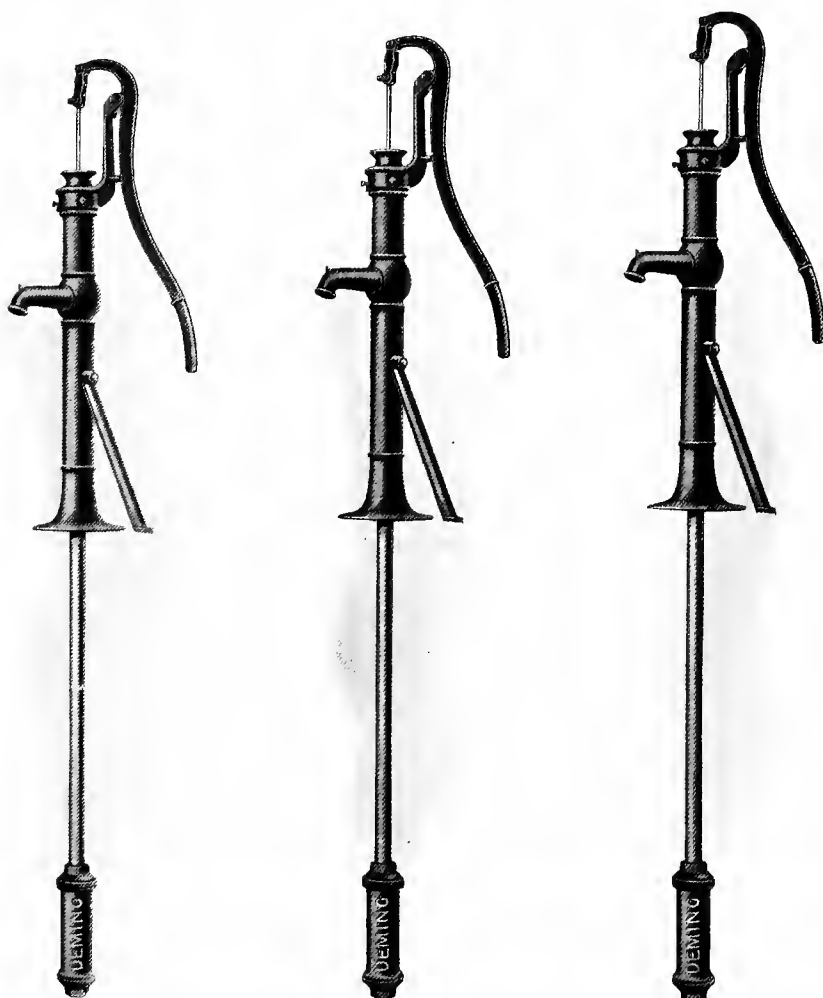
Deming Improved Anti-Freezing Hand Lift Pumps

With Tight Top
For Wells 28 Feet Deep or Less

Fig. 213
Light Standard

Fig. 214
Medium Standard

Fig. 215
Heavy Standard



Description and Lists of these Pumps will be found on the opposite page.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Improved Non-Freezing Hand Lift Pumps

With Tight Top
For Wells 28 Feet Deep or Less

Figs. 213, 214 and 215

These pumps, Figs. 213, 214 and 215, are similar to those on the two preceding pages; the only difference being that they are constructed with tight tops, which gives a direct vertical motion to the piston rod and prevents foreign substances from getting into the working parts through the top of the pumps and are often preferred to the open style of pumps for that reason. A drip hole in the set length pipe, three feet below base, allows the water to flow back into the well and prevents freezing. If the cylinders are lowered into or near the water, they may be used in wells 50 to 75 feet deep, as listed, depending upon the size of the cylinder — see table on page 34.

The bases are cast solid on the stock with the set length pipe connecting under the spout. These pumps are adapted to open or driven wells. Length of stroke, six inches.

Brass Valve Seats are regularly furnished on these pumps.

Sizes and Prices, With Iron Cylinders

SIZES AND FITTINGS			FIG. 213 Height 47 In. Base to Top		FIG. 214 Height 48 In. Base to Top		FIG. 215 Height 50 In. Base to Top	
No.	Size Cylinder Inches	Fitted for Pipe Inches	Cipher	Price	Cipher	Price	Cipher	Price
2	2½	1¼	BLAMELESS	\$ 8.75	BLENDED	\$ 9.25	.....	.....
4	3	1¼	BLARNEY	9.25	BLIGHTED	9.75	BLOOMED	\$10.25
6	3½	1½	BLARE	10.25	BLISTERED	10.75	BLOOMING	11.25
8	4	2	.....	.....	BLINK	12.25	BLOTCHED	12.75

Sizes and Prices, With Brass Lined Cylinders

SIZES AND FITTINGS			FIG. 213 Height 47 In. Base to Top		FIG. 214 Height 48 In. Base to Top		FIG. 215 Height 50 In. Base to Top	
No.	Size Cylinder Inches	Fitted for Pipe Inches	Cipher	Price	Cipher	Price	Cipher	Price
2	2½	1¼	BLOWING	\$11.25	BLUFFED	\$11.75	.....	.....
4	3	1¼	BLOCKING	11.75	BLUFFING	12.25	BLUNTING	\$12.75
6	3½	1½	BLOB	13.25	BLUNDERING	13.75	BLUSTER	14.25
8	4	2	.....	.....	BLUFFY	15.75	BLUSTERING	16.25

Weights in Pounds of Figs. 213, 214 and 215

No.	Fig. 213	Fig. 214	Fig. 215	No.	Fig. 213	Fig. 214	Fig. 215
2	73	75	..	6	82	84	94
4	76	78	88	8	..	92	102

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Non-Freezing Windmill Lift Pumps

With Tight Top
For Wells 28 Feet Deep or Less

Fig. 420
Light Standard

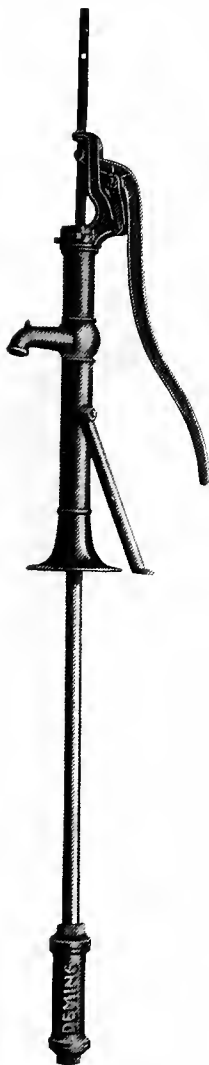


Fig. 421
Medium Standard

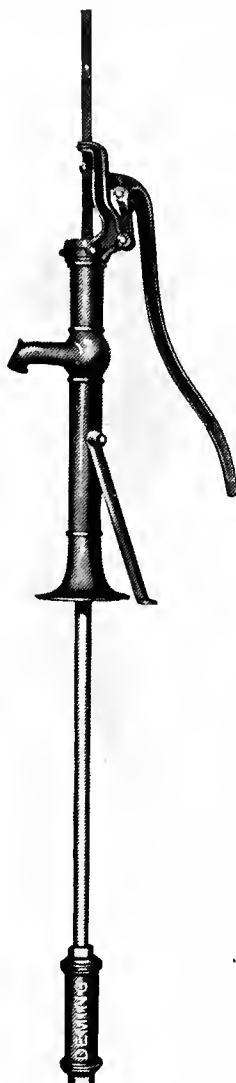
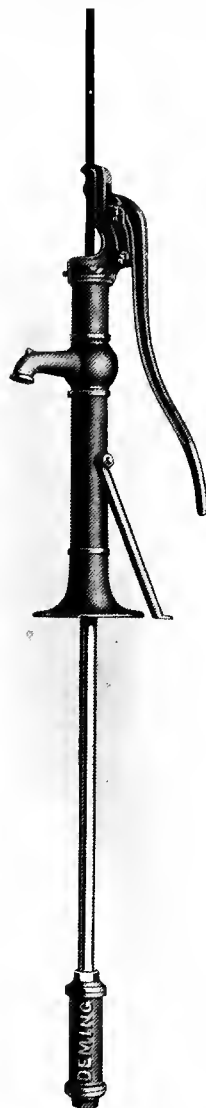


Fig. 423
Heavy Standard



Description and Lists of these Pumps will be found on the opposite page.
Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Non-Freezing Windmill Lift Pumps

With Tight Top
For Wells 28 Feet Deep or Less

Figs. 420, 421 and 423

These pumps are similar to Figs. 213, 214 and 215, shown on the preceding pages; differing only in the windmill top. The addition of this windmill top gives a vertical motion to the piston rod, preventing an uneven action of the plunger in the cylinder and adapts the pumps for operation by windmill. If the cylinders are lowered into or near the water, they may be used in wells 50 to 75 feet deep, as listed, depending upon the size of the cylinder — see table on page 34.

The flat rod of these pumps fits the top tightly; and the same may be said of them in this respect as the pumps on the preceding pages — that dirt and stones or other foreign substances can not be thrown into the pump.

A drip hole in the set length pipe just above the cylinder, prevents freezing. Length of stroke is six inches.

Brass Valve Seats are regularly furnished on these pumps.

Sizes and Prices, With Iron Cylinders

SIZES AND FITTINGS			FIG. 420 Height 44 Inches Base to Top Guide		FIG. 421 Height 45 Inches Base to Top Guide		FIG. 423 Height 47 In. Base to Top Guide	
No.	Size Cylinder Inches	Fitted for Pipe Inches	Cipher	Price	Cipher	Price	Cipher	Price
2	2½	1¼	BOARDING	\$ 9.00	BOATSWAIN	\$ 9.50	.....	.....
4	3	1¼	BOASTFUL	9.50	BOBBINET	10.00	BOBTAILED	\$10.50
6	3½	1½	BOARISH	10.50	BOBOLINK	11.00	BOCKING	11.50
8	4	2	.....	.....	BOBANCE	12.50	BODEFUL	13.00

Sizes and Prices, With Brass Lined Cylinders

SIZES AND FITTINGS			FIG. 420 Height 44 In. Base to Top Guide		FIG. 421 Height 45 In. Base to Top Guide		FIG. 423 Height 47 In. Base to Top Guide	
No.	Size Cylinder Inches	Fitted for Pipe Inches	Cipher	Price	Cipher	Price	Cipher	Price
2	2½	1¼	BODILESS	\$11.50	BOGGISH	\$12.00	.....	.....
4	3	1¼	BODKIN	12.00	BOILING	12.50	BOLSTER	\$13.00
6	3½	1½	BODLE	13.50	BOLDLY	14.00	BOLTING	14.50
8	4	2	.....	.....	BOLDNESS	15.50	BOMBARD	16.00

Weights in Pounds of Figs. 420, 421 and 423

No.	Fig. 420	Fig. 421	Fig. 423	No.	Fig. 420	Fig. 421	Fig. 423
2	73	75	..	6	82	84	94
4	76	78	88	8	..	92	102

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352

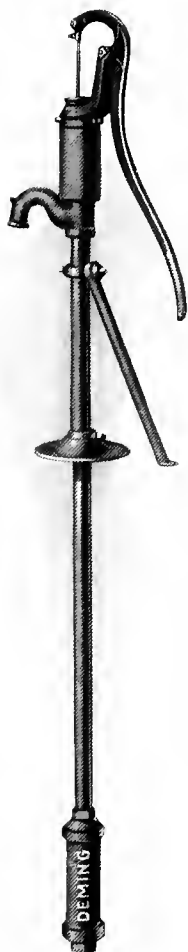


Deming "Mascot" Pipe Standard Lift Pumps

With Adjustable Base and Brace
For Wells 28 Feet Deep or Less

Fig. 382
Windmill Top

Fig. 182
Open Top



The "Mascot" Pump is made open top and windmill top, as represented by these illustrations. It is a pump of recent design; is attractive in appearance and extremely convenient in construction. That part of the standard below the spout is made of pipe and is fitted with an adjustable base which makes it possible to have the pump spout any desired distance above the well platform or sink. The brace is also adjustable and the bearer is of the revolving type.

As shown, Figs. 182 and 382 are adapted to wells 28 feet deep or less, but by lengthening the pipe below the base and lowering the cylinder into the water, they are equally serviceable in wells up to 50 feet deep. The stock and set length on each pump is constructed of 1 1/4-inch pipe. A drip hole in the set length pipe, three feet below the base, allows the water to flow back into the well and prevents freezing. Each pump has six-inch stroke.

Brass Valve Seats are regularly furnished on these pumps.



Sizes and Prices

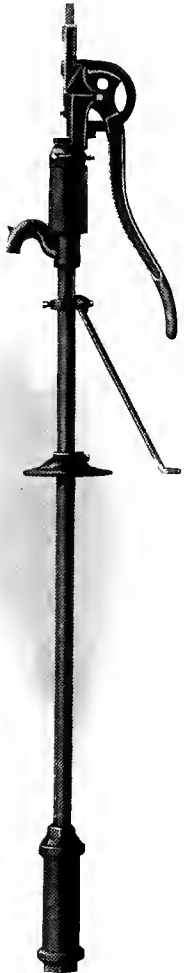
Fig.	Diam. of Cylinder Inches	Fitted for Pipe Inches	WITH IRON CYLINDER		WITH BRASS-LINED CYLINDER		Weight in Pounds
			Cipher	Price	Cipher	Price	
182	3	1 1/4	BACHELOR	\$7.50	BADGER	\$10.00	50
382	3	1 3/4	BUTTERED	8.50	BATLET	11.00	57

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8

Deming "Mascot" Special Pipe Standard Lift Pump

With Cog Lever Top and Guarded Gears
For Wells 28 Feet Deep or Less.

Fig. 482
Open Top



In the construction of Fig. 482 we have used the standard of Fig. 182, shown on the opposite page, equipping this with cog lever top for hand use instead of the plain top.

The gear guards afford absolute protection from the gears, which are entirely enclosed by the guards.

As shown, Fig. 482 is adapted for use in wells 28 feet deep or less, but by lengthening the pipe below the base and lowering the cylinder into or near the water, it may be used in wells 50 feet deep to good advantage.

The straight line or cog lever action insures frictionless operation. The plunger rod receives a direct vertical motion which makes very easy the operation of these cog lever pumps.

Length of stroke is six inches.

A drip hole in the set length pipe three feet below base allows the water to flow back into the well and prevents freezing.

Brass Valve Seat is regularly furnished on this pump.

Sizes and Prices

Fig.	Size of Cylinder Inches	Fitted for Pipe Inches	WITH IRON CYLINDER		WITH BRASS-LINED CYLINDER		Weight in Pounds
			Cipher	Price	Cipher	Price	
482	3	1 1/4	BROMAL	\$9.75	BREWING	\$12.25	58

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Pipe Standard Hand Force Pumps

With Adjustable Base
Will Lift and Force 50 Feet

Fig. 184

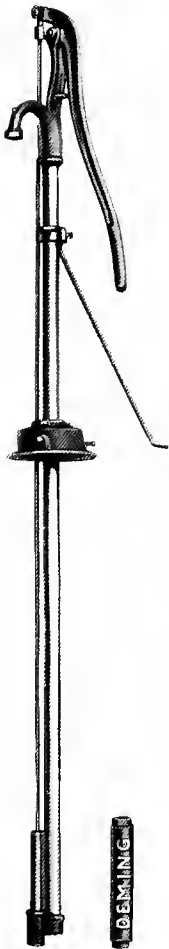


FIG. 184 DOUBLE-ACTING FORCE PUMP. This is one of our latest designs of force pumps, the construction permitting adjustment of the spout to any desired height. It can be used in either open or drilled wells. The base being cup-shaped will fit over the top of any size casing up to six inches in diameter.

Fig. 184 is a double-acting pump, being furnished with a differential plunger which causes a continuous flow of water from the spout. It is provided with a hose nut and tube. The stock and set length are made of 1½-inch pipe.

We furnish Fig. 184 with cylinders sufficiently long to give full 6-inch stroke, either in iron, brass-lined or brass tube, capped inside or outside, as listed.

FIG. 192 "LEADER" SINGLE-ACTING FORCE PUMP. The stock and set length are constructed respectively of 1½ and 1¼-inch pipe. The bearer base and brace are all adjustable. This is one of our simplest types of light force pumps. A hose tube is furnished.

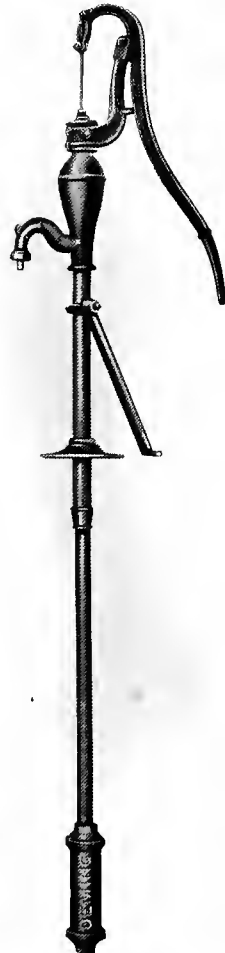
Length of stroke, 6 inches.

As illustrated, these pumps are adapted for use in wells 28 feet deep or less, but by lengthening the pipe below the base and lowering the cylinder into or near the water, they may be used in wells up to 100 feet deep.

A drip hole in the set length pipe three feet below base allows the water to flow back into the well and prevents freezing.

Brass Valve Seats are regularly furnished on these pumps.

Fig. 192



Sizes and Prices

Fig.	Size of Cylinder Inches	Fitted for Pipe Inches	IRON CYLINDER		BRASS-LINED CYLINDER		BRASS CYLINDER		Weight in Pounds
			Cipher	Price	Cipher	Price	Cipher	Price	
184	2½	1¼	BREVE	\$14.00	BRIDLE	\$16.50	BIGAM	\$18.00	75
184	3	1¼	BEZANT	14.00	BEZOAR	16.50	BRIEF	18.00	75
192	3	1¼	BRETT	11.50	BEZEL	14.00	.....	.....	70

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8

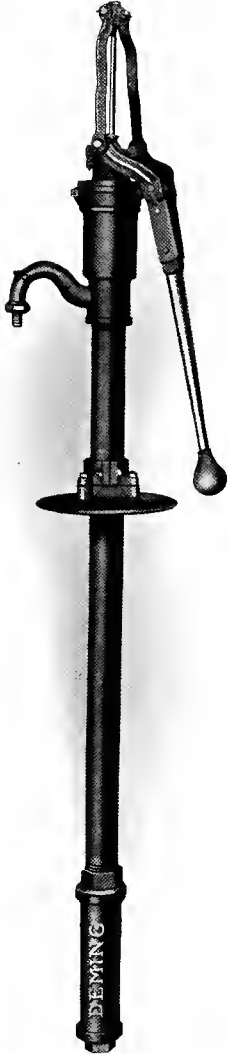


Deming "Mammoth" Hand Well Force Pump

With Adjustable Base and Wooden Handle

Fig. 286

Will Lift and Force 30 Feet



This extra heavy lift and force set length pump was designed to meet the demand for a pump of large capacity, for use in public wells, stock farms, mills and other places where large quantities of water are required.

Fig. 286 is made with $3\frac{1}{4}$ -inch (inside diameter) casing set length, with long links between lever and cross head; large air chamber and wood handle with heavy ball lever weight. The "Mammoth" eliminates the objectionable features of the old wooden pump and retains all its advantages.

The adjustable base clamps rigidly to the pump stock.

The fulcrum or bearer is especially designed for this pump and makes easy the task of pumping large quantities of water. Fig. 286 is fitted with such a large cylinder that a good leverage is necessary.

Furnished with hose tube and nut.

A drip hole in the set length pipe three feet below base allows the water to flow back into the well and prevents freezing.

Brass Valve Seat is regularly furnished on this pump.

Sizes and Prices

No.	Diam. and Length of Cylinder Inches	Suction Pipe Inches	Stroke Inches	IRON CYLINDER		BRASS-LINED CYLINDER		Weight in Pounds
				Cipher	Price	Cipher	Price	
8	4 x 16	2	10	BIDDY	\$16.00	BIDING	\$20.00	140
10	4½ x 16	2	10	BIFFIN	18.00	BIDGET	22.00	145
12	5 x 16	2½	10	BIGGIN	20.00	BIFER	25.00	150

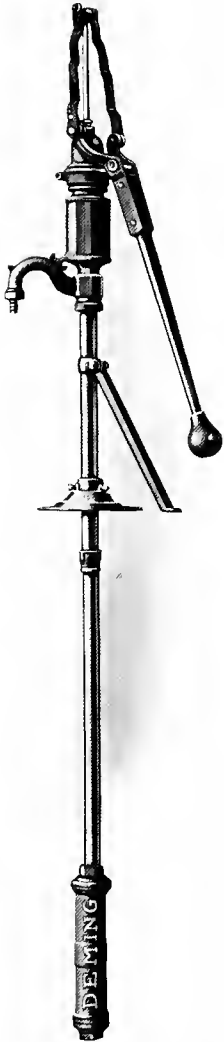
Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming "Premium" Hand Force Pump With Adjustable Base

Fig. 290

Will Lift and Force 35 to 75 Feet



The "Premium" is good for wells 28 feet deep or less, but if the cylinder is lowered into or near the water, it may be used in wells up to 200 feet in depth if a cylinder of smaller diameter is used than is listed below — see table on page 34.

The heavy metal ball on the extra long wooden lever makes pumping easy.

Fig. 290 is made with adjustable bearer, brace and base, so that the standard may be lengthened or shortened as desired, and the lever swung around to any angle.

As a yard pump, we consider the "Premium" without an equal. It is easy to operate and seldom needs repairs. A drip hole in the set length pipe directly above the cylinder, insures safety against freezing. Dealers report that the "Premium" is a splendid seller.

A hose tube is included with the "Premium." The stock is made of 1½-inch pipe, while the set length is 1¼-inch pipe, with the exception of the No. 6 size which has 1½-inch set length.

Brass Valve Seat is regularly furnished on this pump.

Brass-Lined

Sizes and Prices

No.	Diam. and Length of Cylinder Inches	Stroke Inches	Will Lift and Force Feet	BRASS-LINED CYLINDER		BRASS CYLINDER		Weight in Pounds
				Cipher	Price	Cipher	Price	
2	2½ x 14	10	75	BAGGY	\$16.50	BANDBOX	\$18.00	80
4	3 x 14	10	50	BAGNET	18.00	BANANA	19.50	80
6	3½ x 14	10	35	BAILED	20.50	BANKING	22.50	85

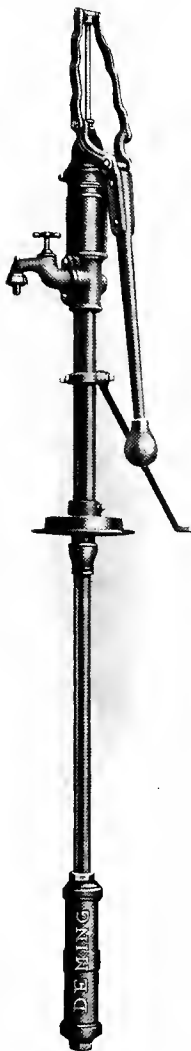
Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Premium Special" Hand Force Pump

With Back Outlet and Cock Spout
Will Lift and Force 35 to 75 Feet

Fig. 291



Brass-Lined

This pump differs from the "Premium" on the opposite page in the following respects:

It is fitted with a cock spout instead of plain spout; has a back outlet tapped for 1¼-inch pipe, and the standard and set length are respectively constructed of 2-inch and 1¼-inch pipe, except the No. 6 size which has 1½-inch set length. The back outlet makes it possible to force water into elevated tanks. The heavy metal ball on the extra long wooden lever makes pumping easy. Hose tube and nut are included.

A drip hole in the set length pipe, three feet below base, allows the water to flow back into the well and prevents freezing.

This is a substantial, high grade pump, suited for lifting and forcing water from 35 to 75 feet, depending on the size of the cylinder. However, for lifting and forcing more than 75 feet, a cylinder of smaller diameter should be used than is listed below — see table on page 34.

The base is cup shaped and will fit over the top of any size casing up to six inches in diameter.

If plain spout is wanted instead of cock spout, deduct \$2.50 from list price.

Brass Valve Seat is regularly furnished on this pump.

Sizes and Prices

No.	Diam. and Length of Cylinder Inches	Fitted for Pipe Inches	Stroke Inches	Will Lift and Force Feet	BRASS-LINED CYLINDER		BRASS CYLINDER		Weight in Pounds
					Cipher	Price	Cipher	Price	
2	2½ x 14	1¼	10	75	BAVIN	\$21.50	BEAGLE	\$22.50	90
4	3 x 14	1¼	10	50	BAWBLE	23.00	BEAKED	24.50	90
6	3½ x 14	1½	10	35	BAWD	25.50	BEAMY	27.50	95

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



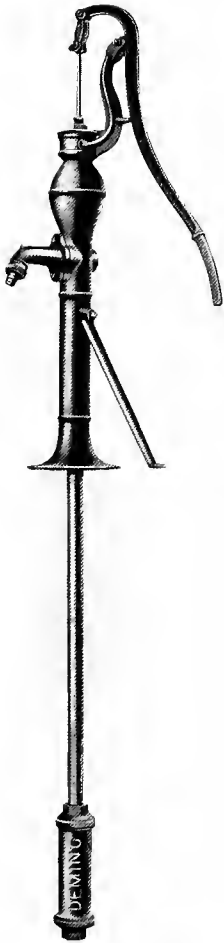
Deming Non-Freezing Hand Force Pumps

With Revolving Top

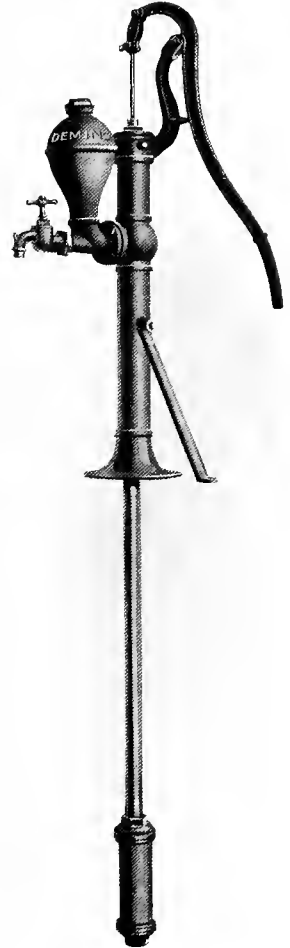
Will Lift and Force 35 to 75 Feet

Fig. 219

Fig. 223



The pumps illustrated on this page are similar in most respects. They differ principally in the construction of the air chamber, which in Fig. 219 is in the standard and cast integral with it. Fig. 223 has a separate air chamber, bolted to the standard, this air chamber being fitted with upward discharge for forcing water into elevated tanks. They are furnished with hose tubes, as shown. As listed, they are adapted to wells 28 feet deep, but when the cylinder is lowered into or near the water, they may be used in wells up to 100 feet deep if a cylinder of smaller diameter is used than listed below — see table on page 34.



A drip hole in the set length pipe, three feet below base, allows the water to flow back into the well and prevents freezing.

Repairs for our pumps will always fit.

If Fig. 223 is wanted with plain spout instead of cock spout, deduct \$2.50 from list.

Fig. 219 has back outlet tapped for 1¼-inch pipe.

Fig. 219 furnished with cock spout at \$2.50 extra, list.

Brass Valve Seats are regularly furnished on these pumps.

Sizes and Prices

Fig.	No.	Size Cylinder Inches	Fitted for Pipe Inches	Weight Pounds	Stroke Inches	Will Lift and Force Feet	IRON CYLINDER		BRASS-LINED CYLINDER	
							Cipher	Price	Cipher	Price
219	2	2½	1¼	82	6	75	BOOZING	\$12.50	BOWING	\$15.00
219	4	3	1¼	84	6	50	BOOSER	13.00	BOVINE	15.50
219	6	3½	1¼	90	6	35	BOOTING	14.00	BOUTANT	17.00
223	2	2½	1¼	98	6	75	BORER	16.50	BOWLING	19.00
223	4	3	1¼	100	6	50	BORDERER	17.50	BOWER	19.50
223	6	3½	1¼	106	6	35	BOREAL	18.50	BOWET	21.50

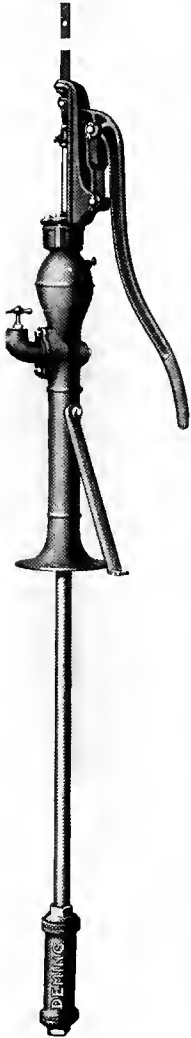
Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Non-Freezing Windmill Force Pump

With Cock Spout and Back Outlet
Will Lift and Force 35 to 75 Feet

Fig. 442



This popular set length pump is adapted for hand or windmill use. It has the same standard as Figs. 440 and 444. The windmill top gives a direct vertical motion to the plunger, thus wearing the cylinder smoothly and evenly. Fig. 442 has revolving tight top and brass stuffing box gland. Accurate and permanent alignment of the piston rod is secured by casting the stuffing box and rod guide in one piece.

The lever can be disconnected when the pump is to be operated by windmill. Spout is flanged and bolted to the standard. Hose tube and nut are regularly furnished. Bearer is clamped to the stock by three hook bolts. Pump rod is made of $\frac{3}{4}$ -inch piston rod steel. Back outlet is regularly tapped for $1\frac{1}{4}$ -inch pipe.

Fig. 442 may be installed in wells up to 200 feet if a smaller diameter cylinder is used than listed below — see table on page 34.

A drip hole in the set length pipe, three feet below the base, allows the water to flow back into the well and prevents freezing.

Deduct \$2.50 from list price if plain spout is desired instead of cock spout.

Brass Valve Seat is regularly furnished on this pump.

Sizes and Prices

Size Cylinder Inches	Stroke Inches	Fitted for Pipe Inches	Will Lift and Force Feet	Weight in Pounds	IRON CYLINDER		BRASS-LINED CYLINDER	
					Cipher	Price	Cipher	Price
2½	6	1¼	75	87	BOTHNIAN	\$16.00	BREME	\$18.50
3	6	1¼	50	91	BOTTLING	16.50	BREN	19.00
3½	6	1½	35	98	BOULLION	17.50	BREWIS	20.50

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming "Peerless" Double-Acting Force Pumps

A Brief Description of this Famous Complete Line of Pumps

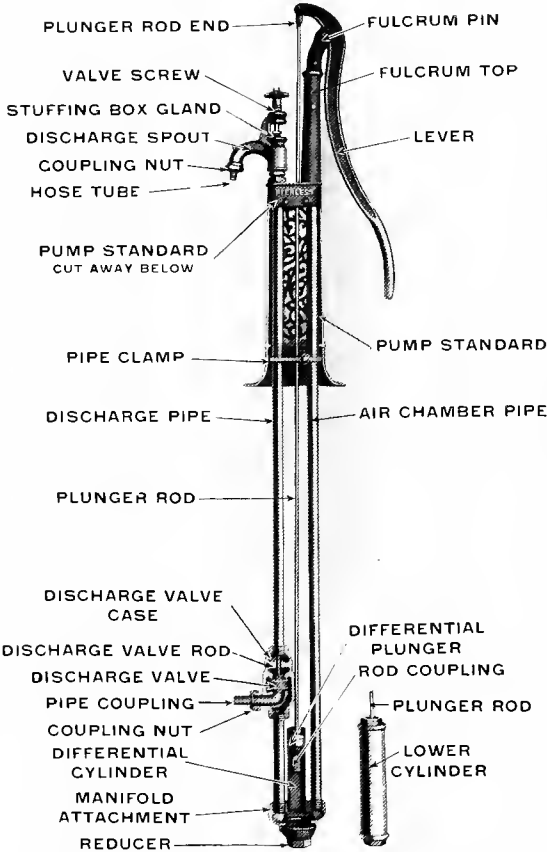


Illustration (in Section) of Fig. 283 "Peerless" Force Pump.

"Peerless" Pumps are made for either shallow, deep or drilled wells, and with or without three-way attachment — with or without windmill top. Any of them may be had with cog lever top. We make the cog lever pumps WITH WINDMILL OR HAND TOP and we can furnish them either way at the same price, since the extra length of windmill rod is the only difference between the hand and windmill cog lever pumps.

EASY TO OPERATE: "Peerless" Pumps are so often found in country school yards and railway stations, because they are so easy to operate. Directly under the lever of every "Peerless" Pump is an air chamber pipe which compresses the supply of air and acts as an elastic cushion, keeping the same amount of water in the discharge pipe so that the water flows from the spout in a steady stream without spurling or splashing.

THE DIFFERENTIAL CYLINDER EQUALIZES THE LOAD: On the up stroke of the plunger the water from the lower cylinder is lifted through the cylinder pipe and pump passages. One-half is forced through the spout and the other half follows the differential piston into the differential cylinder. On the downward stroke, the differential piston forces down and

out through the spout the water that followed it on the up stroke. Thus the pump discharges half the water on the up stroke and half on the down stroke.

Because of the differential cylinder, no stuffing boxes are used. There is nothing, therefore, to hinder the passage of the plunger rod. When garden hose is attached to the spout, there will be no leakage at top of air chamber.

When windmill power is to be applied to the "Peerless" windmill pumps, it is necessary to remove just one pin, and the handle drops down. When this operation is reversed, the pin will always FIT.

The stock is a single casting. The pipes are held rigidly in place by an ingenious clamp which prevents them from swinging. THE DISCHARGE AND AIR CHAMBER PIPES ARE GALVANIZED. On the succeeding six pages the "Peerless" pumps are illustrated and further described.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8

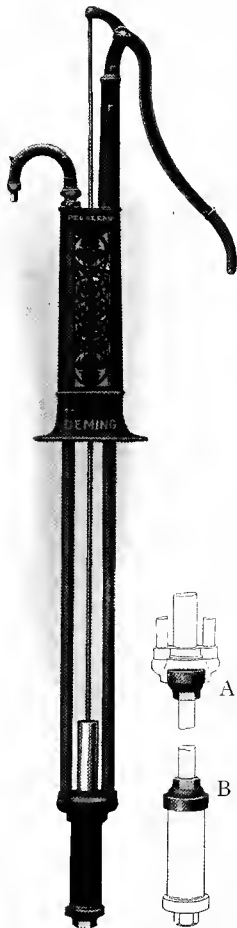


Deming Double-Acting "Peerless" Force Pumps

For Shallow Wells
Will Lift and Force 35 to 75 Feet

Windmill Top
Fig. 450

Hand Top
Fig. 280



Dealers will find that these pumps are a great convenience because the Shallow Well Pumps, Figs. 280 and 450, can readily be made into the Deep Well Pumps, Figs. 281 and 451, see page 56. This is accomplished by simply detaching the lower cylinder and connecting to it, the attachment "B" and to the lower pump casting, the attachment "A." This feature of adjustability is an advantage that gives the dealer four styles of pumps by carrying two styles; together with the attachments. When fitted for deep wells these pumps may be used in wells up to 200 feet deep, if a smaller diameter cylinder is used than is listed below — see table on page 34.

Nos. 2 and 4 "Peerless" Pumps, Figs. 280 and 450 are the most popular size, as they will go in 5 $\frac{5}{8}$ -inch well casing.

Attachments "A" and "B" to make "Peerless" shallow well pumps into deep well pumps, \$1.00 per pair.

A drip hole in the discharge pipe, three feet below base, allows the water to flow back into the well and prevents freezing.

Brass Valve Seats are regularly furnished on these pumps.

Sizes and Prices

Fig.	No.	Diameter Lower Cylinder Inches	Stroke Inches	Fitted for Pipe Inches	Will Go In Drilled Wells Inches	Will Lift and Force Feet	Weight in Pounds	WITH BRASS-LINED CYLINDER	
								Cipher	Price
280	2	2 $\frac{1}{2}$	6	1 $\frac{1}{4}$	5 $\frac{5}{8}$	75	82	BANKRUPT	\$14 00
280	4	3	6	1 $\frac{1}{4}$	5 $\frac{5}{8}$	50	83	BARBARIAN	14 00
280	6	3 $\frac{1}{2}$	6	1 $\frac{1}{2}$	6 $\frac{5}{8}$	35	90	BARBECUE	16 00
450	2	2 $\frac{1}{2}$	6	1 $\frac{1}{4}$	5 $\frac{5}{8}$	75	88	BARLEY	15 00
450	4	3	6	1 $\frac{1}{4}$	5 $\frac{5}{8}$	50	90	BARNACLE	15 00
450	6	3 $\frac{1}{2}$	6	1 $\frac{1}{2}$	6 $\frac{5}{8}$	35	102	BAROMETER	17 00

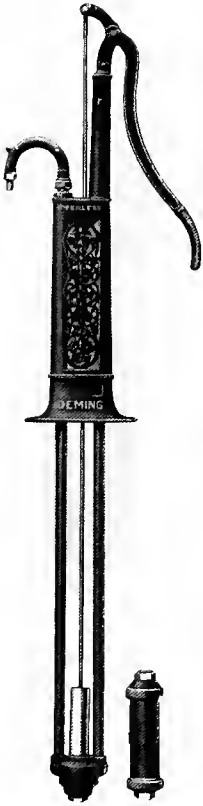


Deming "Peerless" Double-Acting Force Pumps

For Deep Wells
Will Lift and Force 35 to 75 Feet

Fig. 451
Windmill Top

Fig. 281
Hand Top



Instead of having the cylinder attached to the set length as is the case in Figs. 280 and 450, described on the preceding page, Figs. 281 and 451 are furnished with the deep well attachments "A" and "B," and a separate brass-lined cylinder (Fig. 308) which can be dropped down into the well, thereby adapting the pump to wells 200 feet deep or less, if a smaller diameter cylinder is used than is listed below — see table on page 34.

If the lower cylinder is placed in the water, the pump will not require priming.

A drip hole in the discharge pipe, three feet below the base, allows the water to flow back into the well and prevents freezing.

Brass Valve Seats regularly furnished on these pumps.



Sizes and Prices

Fig.	No.	Diameter Lower Cylinder Inches	Fitted for Pipe Inches	Stroke Inches	Will Go In Drilled Wells Inches	Will Lift and Force Feet	Weight in Pounds	WITH BRASS-LINED CYLINDER	
								Cipher	Price
281	2	2½	1¼	6	5½	75	83	BARRICADE	\$15.00
281	4	3	1¼	6	5½	50	86	BASTINADO	15.00
281	6	3½	1½	6	6½	35	90	BAYONET	17.00
451	2	2½	1¼	6	5½	75	89	BEDLAM	16.00
451	4	3	1¼	6	5½	50	92	BEDOUM	16.00
451	6	3½	1½	6	6½	35	96	BEGGAR	18.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



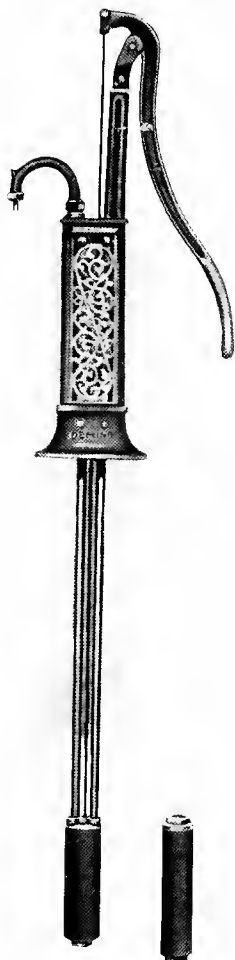
Deming "Peerless" Double-Acting Force Pumps

For Drilled Wells

Will Lift and Force 50 to 75 Feet

Fig. 452
Windmill Top

Fig. 282
Hand Top



Since most drilled wells are of small diameter, we make this "Peerless" type with air chamber and suction pipe close together.

The two cylinders are not connected by pipe, but are left separate so that the lower cylinder may be dropped down to any desired depth. Better results are usually obtained if the lower cylinder is placed in the water. These pumps may be used in wells up to 200 feet deep if a smaller diameter cylinder is used than is listed below — see table on page 34.

The lower cylinder, furnished with this type of "Peerless" pump is our flush capped cylinder, Fig. 322.

A drip hole in the discharge pipe, three feet below the base, allows the water to flow back into the well and prevents freezing.

Brass Valve Seats are regularly furnished on these pumps.



Sizes and Prices

Fig.	No.	Diameter Lower Cylinder Inches	Stroke Inches	Fitted for Pipe Inches	Will Go In Drilled Wells Inches	Will Lift and Force Feet	Weight in Pounds	WITH BRASS CYLINDER	
								Cipher	Price
282	2	2½	6	1¼	3¾	75	85	BELAY	\$16.00
282	4	3	6	1¼	4	50	92	BEHOLDEN	16.00
Special	2	2¼	6	1¼	3	75	85	BEHAVIOR	16.50
452	2	2½	6	1¼	3¾	75	91	BELAYING	17.00
452	4	3	6	1¼	4	50	98	BELLOWS	17.00
Special	...	2½	6	1¼	3	75	91	BELFRY	17.50

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352

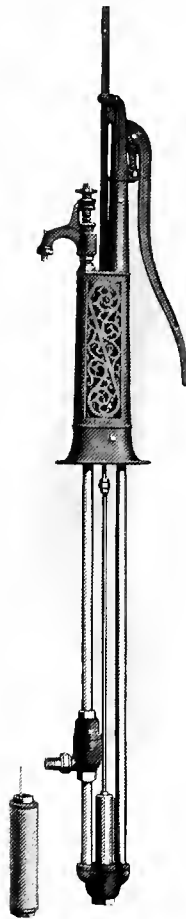
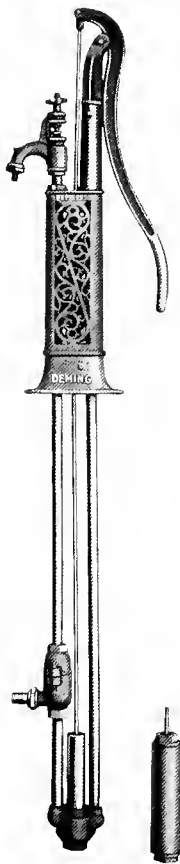


Deming "Peerless" Double-Acting Force Pumps

With Three-Way Valve for Underground Discharge
Will Lift and Force 50 to 75 Feet

Fig. 283
Hand Top

Fig. 453
Windmill Top



With this style of the "Peerless" pumps, the water may be discharged through the spout or through the underground discharge pipe by simply turning a hand-wheel at the top of the spout which operates the distributing valve in the discharge pipe.

Well casing must come only to the UPPER cylinder attachment, 4 feet, 3 inches below the base of the pump, and a pit of that depth should be dug to accommodate the distributing valve. Our new distributing valve is the acme of perfection. With it the water may be discharged through the underground discharge pipe, into a tank at house or barn, a considerable distance from the well.

The lower cylinder furnished with this type of "Peerless" pump is our flush capped cylinder, Fig. 322. These pumps may be used in wells up to 200 feet deep, if a smaller diameter cylinder is used than is listed below — see table on page 34.

A drip hole in the discharge pipe, 3 feet below the base, allows the water to flow back into the well and prevents freezing.

Brass Valve Seats are regularly furnished on these pumps.

Sizes and Prices

Fig.	No.	Diameter Lower Cylinder Inches	Fitted for Pipe Inches	Stroke Inches	Underground Discharge Inches	Diam. Well Lower Cyl. Goes In Inches	Weight in Pounds	WITH BRASS CYLINDER	
								Cipher	Price
283	2	2½	1¼	6	1	3	106	BELVEDERE	\$19.00
283	4	3	1¼	6	1	3½	109	BENEFACTOR	19.00
453	2	2½	1¼	6	1	3	115	BENGAL	20.00
453	4	3	1¼	6	1	3½	116	BETHEL	20.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Peerless" Cog Lever Force Pumps

Fig. 450 1/2
For Shallow Wells

For Shallow and Deep Wells

Will Lift and Force 50 to 75 Feet

These two pumps are fitted with the Deming Cog Lever Top, but otherwise they are the same as Figs. 450 and 451, pages 55 and 66, respectively.

The 2 1/2-inch pumps (No. 2) can be used by hand in wells up to 75 feet deep; the 3-inch pumps (No. 4) in wells up to 50 feet deep; and the 3 1/2-inch pumps (No. 6) in wells up to 35 feet deep or less, than the depth mentioned. Our Fig. 308 cylinder is furnished with these pumps. For deeper wells a smaller cylinder should be used than is listed below—see table on page 34.

The "Peerless" pumps with cog lever, can be used either by hand or windmill. The gear guard ABSOLUTELY PREVENTS possibility of CHILDREN'S FINGERS becoming caught in the cogs.

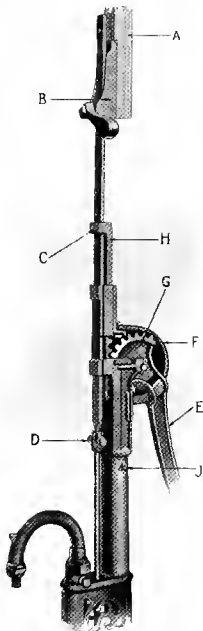
When used as a hand pump, a pin is inserted at the opening "C." When used as a windmill pump the pin is taken out which allows the handle or lever "E" to drop down, and in addition a windmill slide rod is attached, preferably our "Hercules" gravity windmill connection.

Brass Valve Seats are regularly furnished on these pumps.

Key to Engraving

- A—Wood rod of windmill.
- B—Hercules windmill connection.
- C—Opening for steel pump pin used always with hand pumps.
- D—Combination coupling for connecting flat and round rod.
- E—Lever, which hangs down when pin is removed from "C."
- F—Gear guard, partly broken away to show cogs "G" on lever and rack.
- G—Cog mechanism, a part of lever "E."
- H—Actuating rack for hand use. When used by hand the pin MUST be inserted at "C."
- J—Bolt for supporting air chamber pipe.

Fig. 451 1/2
For Deep Wells



Detail Cut of Cog Lever



Sizes and Prices

Fig.	No.	Diameter Lower Cylinder Inches	Fitted for Pipe Inches	Stroke Inches	Will Go In Drilled Wells Inches	Weight in Pounds	WITH BRASS-LINED CYLINDER	
							Cipher	*Price
450 1/2	2	2 1/2	1 1/4	6	5 5/8	99	BURIAL	\$16.50
450 1/2	4	3	1 3/4	6	5 5/8	101	BURIER	16.50
450 1/2	6	3 1/2	1 3/2	6	5 5/8	103	BURKE	18.50
451 1/2	2	2 1/2	1 3/4	6	5 5/8	91	BURKED	17.50
451 1/2	4	3	1 3/4	6	5 5/8	103	BURKING	17.50
451 1/2	6	3 1/2	1 1/2	6	5 5/8	105	BURKER	19.50

*Extra list for Fig. 390 "Hercules" Windmill connection, \$1.00.



Deming "Peerless" Cog Lever Windmill Force Pumps

Fig. 452½
For Drilled Wells

For Drilled Wells; and with Three-Way
Distributing Valve

Fig. 453½
With Three-Way
Discharge Valve

Will Lift and Force 50 to 75 Feet

Figs. 452½ and 453½ are the same as pumps illustrated on pages 57 and 58, respectively, except that these pumps are fitted with cog lever tops instead of the plain windmill top.

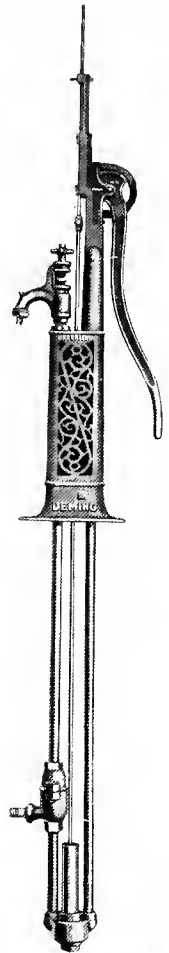
These cog lever "Peerless" pumps are made WITH WINDMILL OR HAND TOP and we can furnish them either way at the same price, since the extra length of windmill rod is the only difference between the hand and windmill cog lever pumps. They may be used in wells up to 200 feet deep, if smaller diameter cylinders are used than listed below — see table on page 34.

All "Peerless" pumps are furnished with hose tubes so that garden hose can be used.

The lower cylinder furnished with this type of "Peerless" pump is our flush capped brass body cylinder, Fig. 322.

A drip hole in the set length pipe, three feet below the base, allows the water to flow back into the well and prevents freezing.

Brass Valve Seats are regularly furnished with these pumps.



Sizes and Prices

Fig.	No.	Diameter Lower Cylinder Inches	Fitted for Pipe	Stroke Inches	Set Length and Lower Cylinder Will Go In Drilled Well Inches	Weight in Pounds	WITH BRASS CYLINDER	
							Cipher	Price
452½	2	2¼	1¼	6	3½	91	BURL	\$18.50
452½	4	3	1¼	6	4	98	BURLACE	
452½	Special	2½	1¼	6	3	91	BURLER		19.00
					Lower Cyl. Will Go In Drilled Wells, Inches			
453½	2	2½	1¼	6	3	115	BURLY	21.50
453½	4	3	1¼	6	3½	116	BURLESQUE	21.50

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



W E L L P U M P S T A N D A R D S

FOR HAND AND WINDMILL

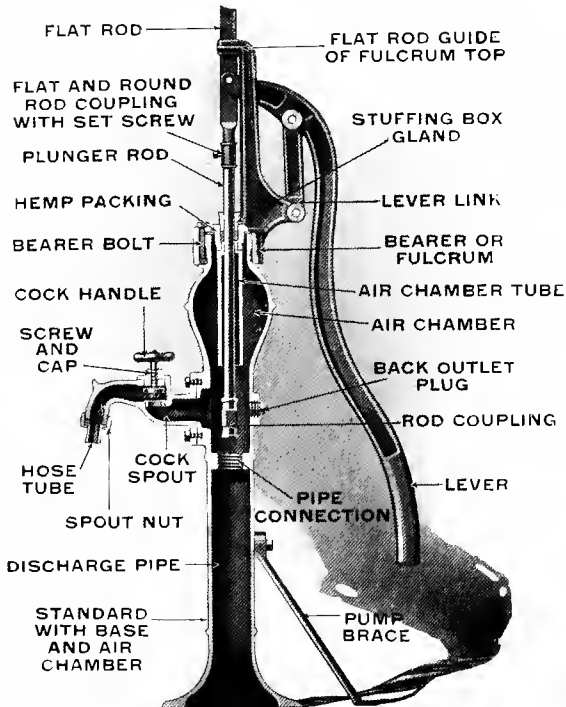
LIFT AND FORCE PUMP STAND-
ARDS, STUFFING-BOX HEADS,
ETC., FOR EITHER SHALLOW OR
DEEP WELLS; THE CYLINDER
OR WORKING BARREL BEING
SEPARATE AND USUALLY
PLACED IN THE
WATER





Typical Deming Force Pump Standard (in Section)

For Operation By Hand or Windmill



This illustration will serve to identify the parts entering into the construction of a pump standard. It portrays our Fig. 444 windmill force pump standard, which is a representative type of the classification to which this particular section of our Catalogue is devoted.

The term "Standard," as applied to pumps, indicates a pump stock with bearer, lever and rod connection fitted for pipe and adapted for use with any ordinary independent cylinder when pipe and rod are added. "Standards" are classified as follows: Hand lift pump standard; Windmill lift pump standard; Hand force pump standard; Windmill force pump standard; Deep well force pump standard, also hand and windmill standards with underground discharge, all of which are described on the following pages of this section.

The dealer can fit a pump for a well of any depth by securing the proper standard and cylinder and supplying the pipe and rod from his stock. Many dealers do this in preference to buying the complete set length pump.

When standards are required for wells 75 feet deep or more, well pipe should be carried by independent supports in the well, so that the weight of the pipe will not be carried entirely by the thread in the standard. The cylinders should in no case be placed a greater distance than twenty feet above the water to secure good suction, and wherever possible they should be submerged. The size of cylinder to be used with each standard is determined by the depth of the well. (See table on page 34.)

Deming standards with six inch stroke are fitted regularly for $1\frac{1}{4}$ inch pipe; with ten inch and adjustable stroke, for two inch pipe. However, we will tap them for other sizes of pipe, when so ordered, and will also thread the stub of the rods of both the standards and cylinders for such sizes of couplings as may be specified.

Deming standards are the result of years of experience. They are well proportioned and practical, and are as near perfection as it is possible to make them.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Improved Well Lift Pump Standards

With Pipe Connection Under Spout
For Wells 70 Feet Deep or Less

Fig. 224

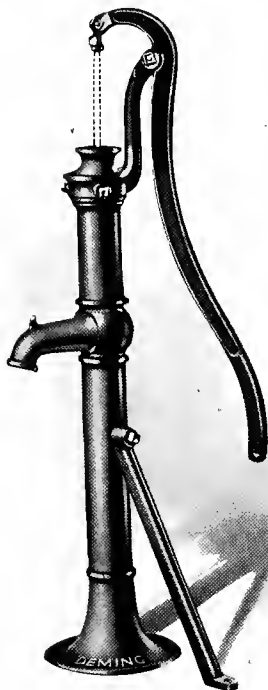
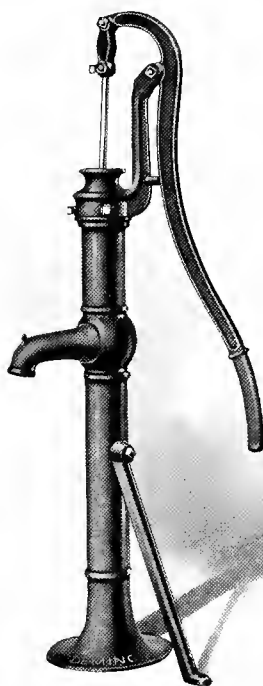


Fig. 228



These pump standards are suited for wells from 30 to 70 feet deep — the larger size, No 5, being best adapted for the deeper wells. These Standards have solid base and are threaded for pipe under the spout.

Attached to the lever of Fig. 224 is a rod eye connection for $\frac{7}{16}$ -inch or $\frac{3}{8}$ -inch well rod. A set-screw on this connection holds the rod in place. When the pump is installed, the complete length of $\frac{7}{16}$ -inch or $\frac{3}{8}$ -inch rod may be used from cylinder to top of pump, without coupling. For this reason we do not furnish Fig. 224 with stub rod.

Fig. 228 is fitted with our regular $\frac{5}{8}$ -inch steel rod and a reducing coupling for connecting to $\frac{3}{8}$ -inch well rod.

Cylinders or working barrels of all descriptions for use with these pumps will be found elsewhere.

Sizes and Prices

No.	Fitted for Pipe	Length of Stroke Inches	FIG. 224, OPEN TOP				FIG. 228, TIGHT TOP			
			Height Inches	Weight Pounds	Cipher	Price	Height Inches	Weight Pounds	Cipher	Price
3	1¼	6	44	44	BRACELET	\$5.00	47	44	BRAGGART	\$5.75
4	1½	6	45	50	BELCH	5.50	49	50	BELEE	6.25
5	1¾	6	47	60	BRACKISH	6.00	50	60	BRAIDING	6.75

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Deep Well Lift Pump Standard
With Bolted Pipe Flange

For Wells 150 Feet Deep or Less

Fig. 230

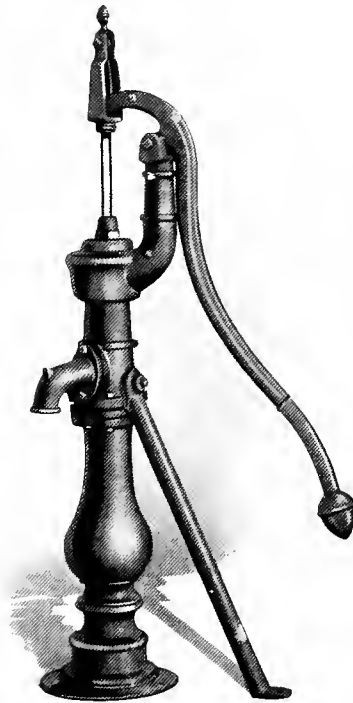


Fig. 230 is an extra heavy lift pump standard, which will give good service in wells 150 feet deep, provided a two-inch cylinder is used. It is, of course, more desirable to install the pump in wells of lesser depth.

Fig. 230 is made in two sections, with pipe flange bolted between so that the upper section can be removed while connection is being made to the well pipe. After the operation is completed, the upper section can be replaced.

With such a heavy pump as Fig. 230, the flange construction will be found very convenient, because, when making the connection to well pipe, there is only the lower section to be handled. The lever is long and weighted.

Pump rod is $\frac{7}{8}$ -inch piston rod steel, threaded $\frac{7}{16}$ -inch and fitted with $\frac{7}{16} \times \frac{3}{8}$ -inch reducing coupling for connecting to $\frac{3}{8}$ -inch well rod.

Fitted for $1\frac{1}{4}$, $1\frac{1}{2}$, or $2\frac{1}{2}$ -inch pipe when so ordered. Extra pipe flanges, 50 cents extra list.

Sizes and Prices

Stroke Inches	Fitted for Pipe Inches	Height Inches	Weight Pounds	Cipher	Price
7	2	51½	83	BRAMBLE	\$10.00

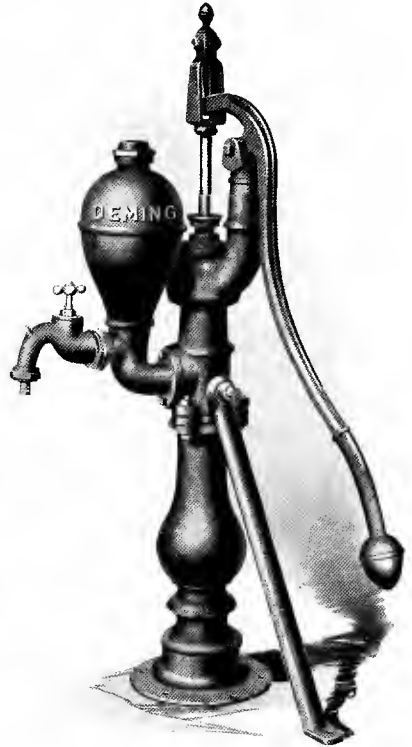
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Deming Deep Well Force Pump Standards
With Upward Discharge
Will Lift and Force 35 to 150 Feet

Fig. 231

Fig. 1231



Provided a two-inch cylinder is used, Figs. 231 and 1231 will lift and force 150 feet, but of course it is more desirable to install them where the duty is not quite so heavy, and then use 2½ or 3-inch cylinders. These are very heavy and substantial force pump standards, and are very often used as school pumps, town pumps, etc. They are especially well adapted to coal mining sections, or wherever unusually hard service is to be expected.

These pumps are made in two sections with pipe flange bolted between, so that the upper section can be removed while connection is being made to well pipe. After the operation is completed, the upper section can be replaced.

This makes it necessary to handle only the lower section, during the installation. In the case of such heavy pumps, dealers and well drillers will much appreciate this feature.

Fig. 1231 is furnished regularly with cock spout, and with nut on upward discharge, tapped for pipe. Fig. 231 has plain spout fitted with hose nut and tube. Air chamber of Fig. 231 is fitted with cap nut on upward discharge.

Pump rod is fitted with 7/16 x 3/8-inch reducing coupling.

Sizes and Prices

Fig.	Fitted for Pipe Inches	Stroke Inches	Height Inches	Upward Discharge Fitted for Pipe Inches	Weight Pounds	Cipher	Price
231	2	7	51½	Cap Nut	115	BRANCHED	\$13.00
1231	2	7	51½	1¼	120	BURRY	15.50

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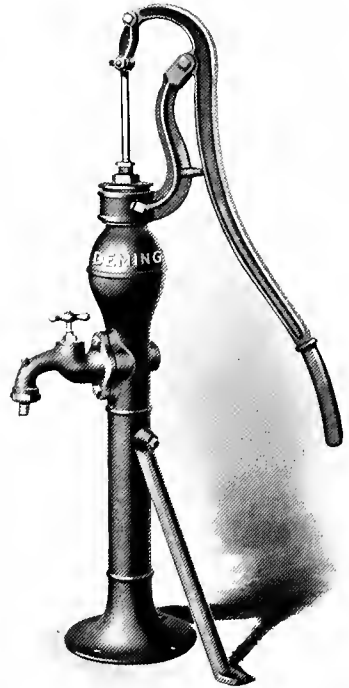


Deming Improved Well Force Pump Standards
 With Air Chamber in the Stock
 Will Lift and Force 35 to 100 Feet

Fig. 229



Fig. 1229



Well force pump standards with solid base, Figs. 229 and 1229, when used in connection with cylinders of the proper sizes will lift and force 35 to 100 feet. To prevent freezing, the pipe should be provided with a drip hole three feet below the base, which allows the water to flow back after pump has been used.

The air chamber is formed by enlarging the stock above the spout. By loosening one set screw, the lever may be set at any angle to the spout. The spout is flanged and bolted to the standard, and is furnished with nut and $\frac{3}{4}$ -inch hose tube.

Pump rod is $\frac{5}{8}$ -inch cold rolled steel, threaded $\frac{1}{16}$ -inch and fitted with reducing coupling for $\frac{3}{8}$ -inch well rod.

Fig. 1229 is regularly furnished with cock spout. Cylinders or working barrels for use with these standards are listed elsewhere.

Sizes and Prices

Fig.	Stroke Inches	Fitted for * Pipe Inches	Height Inches	Back Outlet Tapped for Pipe Inches	Weight Pounds	Cipher	Price
229	6	1 $\frac{1}{4}$	48 $\frac{1}{2}$	1 $\frac{1}{4}$	58	BRAINED	\$ 9.00
1229	6	1 $\frac{1}{4}$	48 $\frac{1}{2}$	1 $\frac{1}{4}$	63	BURROW	11.50

*Fitted for 1 $\frac{1}{2}$ or 2-inch pipe when so ordered.

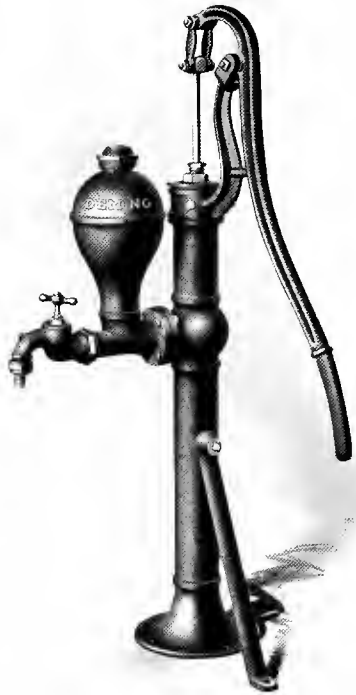
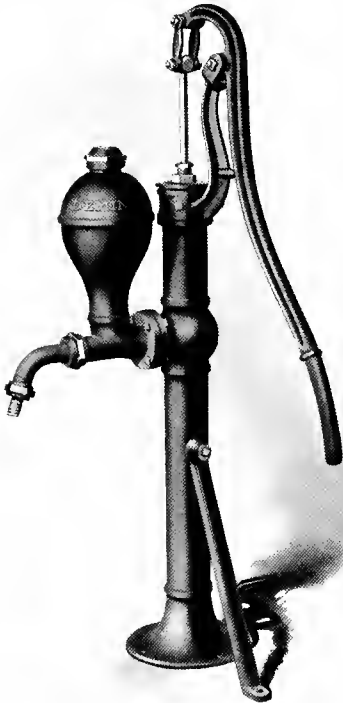
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Deming Improved Well Force Pump Standards
 With Air Chamber Bolted on the Standard
 Will Lift and Force 35 to 100 Feet

Fig. 239

Fig. 1239



Well force pump standards with solid base, Figs. 239 and 1239 when used in connection with cylinders of the proper sizes, will lift and force 35 to 100 feet. To prevent freezing, the pipe should be provided with a drip hole, three feet below the base, which allows the water to flow back into the well after pumping.

The air chamber is separate and bolted to standard. The upward discharge of Fig. 239 is furnished with a cap nut, spout, hose nut and tube. Air chamber of Fig. 1239 is fitted with nut tapped for pipe on upward discharge.

By loosening one set-screw, the lever may be set at any angle with the spout. Fig. 1239 is regularly supplied with cock spout. Otherwise it is same as Fig. 239.

Pump rod is $\frac{5}{8}$ -inch piston rod steel, threaded $\frac{1}{16}$ -inch and fitted with reducing coupling for $\frac{3}{8}$ -inch well rod.

Cylinders or working barrels for use with these standards are listed elsewhere.

Sizes and Prices

Fig.	Stroke Inches	Fitted for * Pipe Inches	Height Inches	Upward Discharge Fitted for Pipe Inches	Weight Pounds	Cipher	Price
239	6	1 $\frac{1}{4}$	49	Cap Nut	80	BRAINLESS	\$11.00
1239	6	1 $\frac{1}{4}$	49	1 $\frac{1}{4}$	85	BURSAR	13.50

*When so ordered, can be fitted for 1 $\frac{1}{2}$ or 2-inch pipe.



Deming Improved Lift Pump Standards

For Operation By Hand or Windmill
For Wells 70 Feet Deep or Less

Fig. 394

Fig. 188

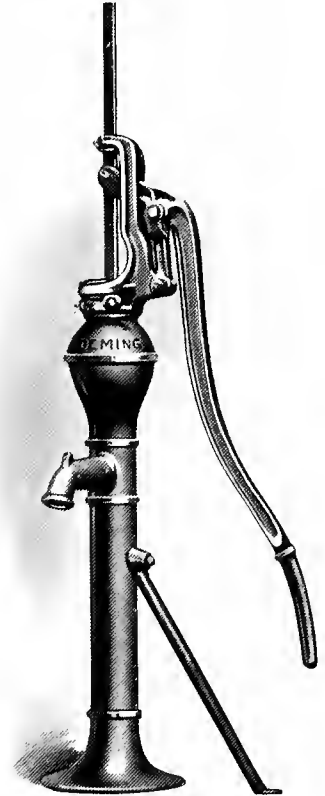


Fig. 188 is our new well pump top and base for tubular wells. It can also be used for open wells with two-inch pipe for the standard, connecting by reducer to the cylinder. The cross-head at top is tapped to take a flat rod for use with windmill. Both sizes of Fig. 188 are fitted for 2-inch pipe as indicated by the dotted lines.

Fig. 394 is a swell top windmill lift pump standard, adapted for either tubular or drilled wells. The enlarged top forms a water chamber which prevents the water from escaping at the top. The base is cast solid on the stock. Furnished regularly with solid windmill rod. Bearer is fastened with set-screws and can be placed at any angle. Cylinders or working barrels for these standards are listed elsewhere.

Sizes and Prices

Fig.	WITH SIX-INCH STROKE				WITH TEN-INCH STROKE				WITH ADJUSTABLE STROKE			
	*For Pipe Inches	Weight Lbs.	Cipher	Price	For Pipe Inches	Weight Lbs.	Cipher	Price	For Pipe Inches	Weight Lbs.	Cipher	Price
188	2	37	DEPOT	\$5.00	2	38	DEPLORE	\$6.00	2	40	DEMUR	\$6.50
394	1½	58	DABBING	8.00	2	60	DABBING	9.00	2	62	DEMY	9.50

*Fitted for 1¼, 1½, 2 or 2½-inch pipe, but always as listed unless otherwise ordered.

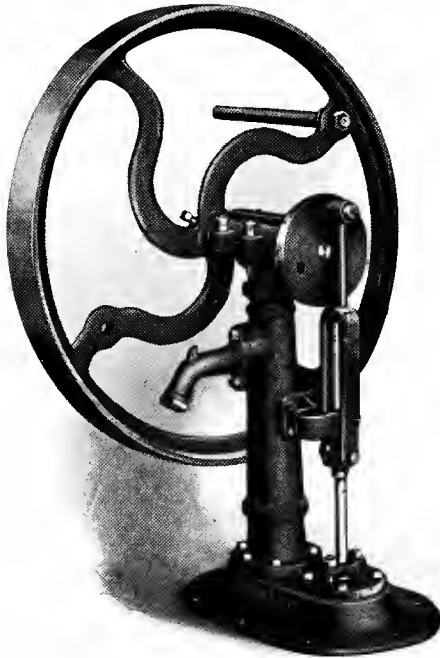
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Deming Deep Well Force Pump Standard

For Operation By Hand or Power
For Wells 150 Feet Deep or Less

Fig. 584



The above cut represents a deep well force pump standard, arranged with fly-wheel and crank, also pitman with rod guide. The stuffing-box is in the base; to this also the standard is securely bolted.

At the top of standard is the crank shaft journal, on one side being fly-wheel with handle, and on the other an adjustable disc crank and pitman.

When used for forcing water a distance, we supply in place of spout a 1 1/4-inch flange which is threaded same as suction, if so ordered.

The cylinders to be used with Fig. 584 are Figs. 300, 308, 312, 319 and 322. Description and lists of cylinders are given elsewhere.

No. 2 is shown in cut; No. 1 is the same except with plain fly-wheel and handle for hand operation.

Sizes and Prices

No.	*Fitted for Pipe Inches	Stroke Inches	Fly-wheel Inches	Discharge	Weight Pounds	Cipher	Price
1	1 1/2	6	36	Plain Spout	363	BRASIER	\$39.00
2	1 1/2	6	36 x 4 1/2	Plain Spout	365	BRASSY	41.00

*Fitted for 1 1/4, 1 1/2 or 2-inch pipe, but always for 1 1/2-inch, unless otherwise ordered. Nos. 1 and 2 always fitted with Plain Spout unless Flange is especially ordered.

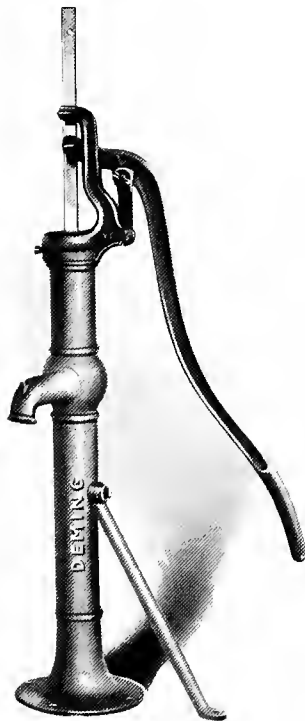
Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Windmill Lift Pump Standard

For Wells 100 Feet Deep or Less

Fig. 403



The above Pump Standard, as may be seen, is adapted for either hand or windmill use. We have combined in this Standard every good quality necessary to make a perfect pump. It is strong and substantial, and symmetrical in design. The pipe screws into the stock under the spout, which prevents liability to serious damage by frost. A drip hole should be drilled in the suction pipe about three feet below the base. The No. 5 pump can be tapped for 2 $\frac{1}{2}$ -inch pipe. The bearer is adjustable. The pump rod is threaded $\frac{1}{8}$ -inch, and is supplied with a coupling for reducing to $\frac{3}{8}$ inch. Cylinders or working barrels for use with this Pump Standard are shown and listed elsewhere.

Sizes and Prices

No.	WITH SIX-INCH STROKE				WITH TEN-INCH STROKE				WITH ADJUSTABLE STROKE— 6, 8 or 10-inch					
	*Fitted for Pipe Inches	Height Inches	Cipher	Weight Pounds	Price	*Fitted for Pipe Inches	Height Inches	Weight Pounds	Cipher	Price	*Fitted for Pipe Inches	Cipher	Weight Pounds	Price
3	1 $\frac{1}{4}$	44	DAHLIA	50	\$7.00	2	48	52	DAMNED	\$8.00	2	DENT	54	\$8.50
4	1 $\frac{1}{4}$	45	DAINLY	56	7.50	2	49	63	DAMNABLE	8.50	2	DENTIL	64	9.00
5	1 $\frac{1}{4}$	47	DAMASK	63	8.00	2	51	69	DAMNATION	9.00	2	DERAY	70	9.50

*Fitted for 1, 1 $\frac{1}{4}$, 1 $\frac{1}{2}$ or 2-inch pipe, but always as listed, unless otherwise specified.

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Deming Windmill Force Pump Standards
With Adjustable Stroke and Solid Rod
For Wells 80 Feet Deep or Less

Fig. 484

Fig. 1444

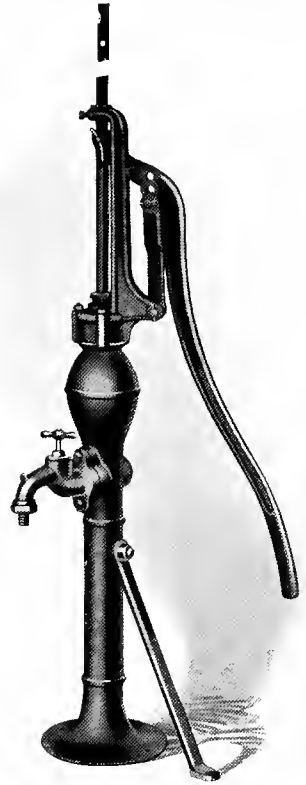
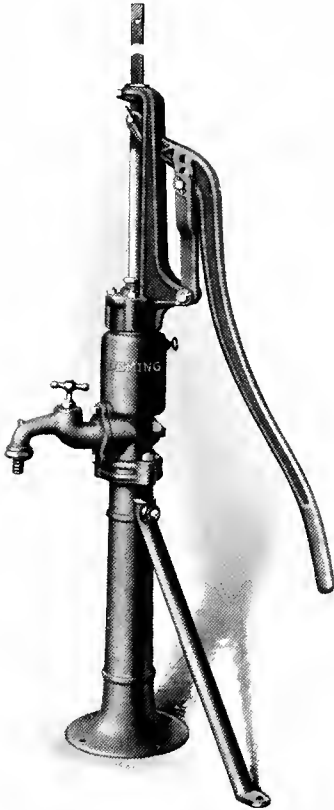


Fig. 484 is a very useful Force Pump Standard, with windmill top and swivel spout. This pump can be used with any of our independent cylinders shown elsewhere. In certain cases there are advantages in using a pump of this kind, since the position of the spout and lever can be changed at will after the pump is set in the well. The fulcrum top and the spout can be placed in any desired position with relation to each other. A separate flange between the base and the top permits the well pipe to be easily attached. The pump rod is threaded $\frac{7}{16}$ -inch, and is supplied with a coupling for reducing to $\frac{3}{8}$ -inch. This pump, as shown, has solid rod, which can be removed without disturbing the fulcrum top or stuffing-box. This is a great advantage when installing the pump. If plain spout is wanted, instead of cock spout, deduct \$2.50 from list.

Fig. 1444 is similar to our Figs. 440 and 444, illustrated elsewhere, except that it is fitted with a solid rod, the same as Fig. 484.

Size and Price

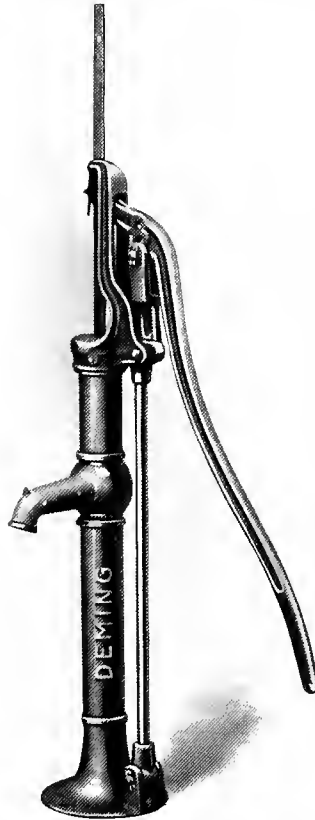
Fig.	*Fitted for Pipe Inches	Stroke	Back Outlet Tapped for Pipe Inches	Side Outlet Tapped for Pipe Inches	Height to Top of Rod Guide Inches	Weight Pounds	Cipher	Price
484	1 $\frac{1}{4}$	Adjustable	...	1 $\frac{1}{4}$	53	77	DEPOSER	\$16.00
1444	1 $\frac{1}{4}$	6, 8 or 10-inch	1 $\frac{1}{4}$...	50	74	DERM	15.00

*Fitted for 1 $\frac{1}{2}$ or 2-inch pipe when especially so ordered.

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Deming Windmill Lift Pump Standard
 With Long Fulcrum
 For Wells 35 to 100 Feet Deep
 Fig. 494



Our improved Windmill Lift Pump Standard, with extra long fulcrum, will be greatly appreciated by pump dealers and users. The long fulcrum throws all the strain of the lever when pumping, on the base of the pump instead of the pump top. By this arrangement the pump top and rod guide will always remain rigid and in place.

The illustration shows Fig. 494 with adjustable stroke. It is also made with six-inch stroke, as listed below.

The pump rod is threaded $\frac{7}{16}$ -inch, and is fitted with a $\frac{7}{16} \times \frac{3}{8}$ -inch coupling, so that $\frac{7}{16}$ or $\frac{3}{8}$ -inch rod may be used. Pumps that are tapped for two-inch pipe will, when specified, be fitted with one-inch wood rod fork.

Cylinders or working barrels for use with this standard are illustrated and listed elsewhere.

Sizes and Prices

Fig.	Stroke Inches	*Fitted for Pipe Inches	Weight Pounds	Cipher	Price
494	6	1 $\frac{1}{4}$	65	DEITY	\$ 8.50
494	6, 8 and 10	2	70	DEJECTION	10.00

*Fitted for 1, 1 $\frac{1}{4}$, 1 $\frac{1}{2}$ or 2-inch pipe, but always as listed, unless otherwise ordered.

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Deming Windmill Force Pump Standards

With Long Fulcrum and Back Outlet
Will Lift and Force 35 to 200 Feet

Fig. 496

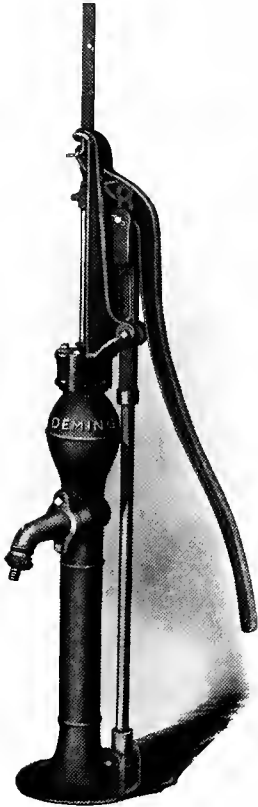
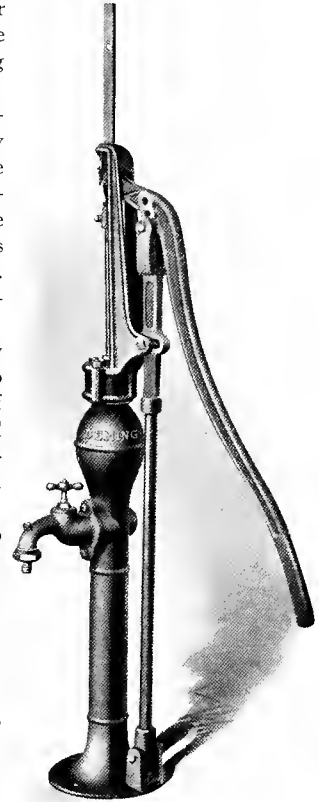


Fig. 498



The long fulcrum or bearer throws all of the lever strain on the base when pumping, instead of putting it on the pump top.

Accurate and permanent alignment of the piston rod is secured by casting the stuffing-box and rod guide in one piece. The levers can be disconnected when the pump is to be operated by windmill. The spout is flanged and bolted to the standard. Hose tube and nut are regularly furnished.

Back outlet is tapped regularly for 1 1/4-inch pipe, for discharging into elevated tank. Pump rod is made of 3/4-inch piston rod steel. It is threaded 7/16-inch and is furnished with a 7/16 x 3/8-inch coupling so that 7/16 or 3/8-inch well rod may be used.

Where there is no liability to danger from freezing, we recommend the use of foot valves and strainers with these standards. Figs. 496 and 498 are made to exact gauges so that repairs will always fit.

Fig. 498 is regularly furnished with cock spout. Otherwise it is exactly like Fig. 496.

Cylinders or working barrels for use with these standards are illustrated and listed elsewhere.

Sizes and Prices

WITH SIX-INCH STROKE							WITH ADJUSTABLE STROKE -- 6, 8 OR 10-INCH				
Fig.	Spout	Fitted for Pipe Inches	Weight Lbs.	Back Outlet Tapped for Pipe Inches	Cipher	Price	Fitted for Pipe Inches	Weight Lbs.	Back Outlet Tapped for Pipe Inches	Cipher	Price
496	Plain	1 1/4	80	1 1/4	DELIGHT	\$11.00	2	80	1 1/4	DELUSION	\$12.50
498	Cock	1 1/4	83	1 1/4	DELIRIUM	13.50	2	83	1 1/4	DEMAGOGUE	15.00

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Deming Windmill Force Pump Standard With Back Outlet

Will Lift and Force 35 to 200 Feet

Fig. 440

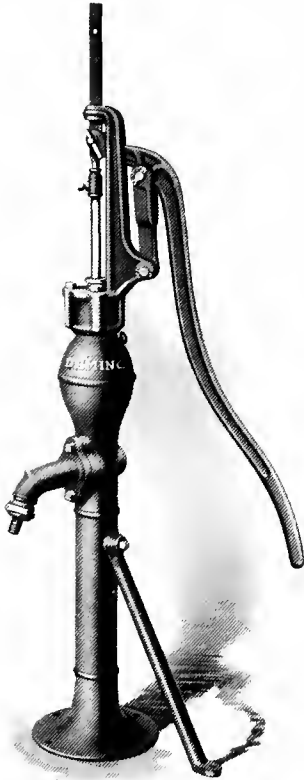
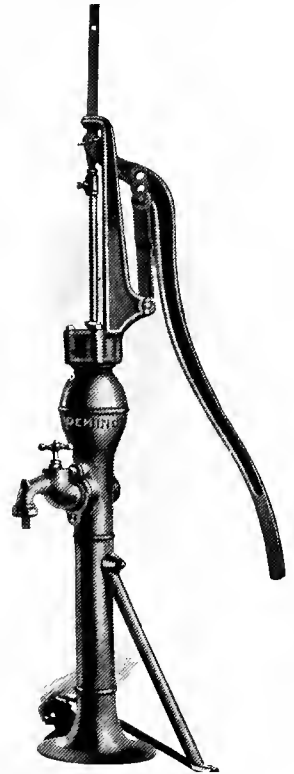


Fig. 444



These popular Standards are adapted for hand or windmill use. They have revolving tight top. The piston rod is always in line because the stuffing-box and rod guide are made in one casting. Stuffing-box gland is brass. The lever can be disconnected when the pumps are to be operated by windmill. The spout is flanged and bolted to the Standard. Hose tube and nut are regularly furnished. The bearer is secured with strong hook bolts.

The back outlet on each pump is tapped for 1 1/4-inch pipe.

The pump rod is made of 3/4-inch piston rod steel; is threaded 7/16 inch and is furnished with a 7/16 x 3/8-inch coupling, so that 7/16 or 3/8-inch well rod may be used.

Where there is no liability to danger from freezing, we recommend the use of foot valves and strainers with these standards. Figs. 440 and 444 are made to exact gauges, so that repairs will always fit.

Cylinders or working barrels for use with these standards are illustrated and listed elsewhere.

Sizes and Prices

Fig.	WITH SIX-INCH STROKE					WITH ADJUSTABLE STROKE—6, 8 OR 10-INCH				
	Fitted for Pipe Inches	Height Inches	Weight Lbs.	Cipher	Price	Fitted for Pipe Inches	Height Inches	Weight Lbs.	Cipher	Price
440	1 1/4	46	63	DUBBER	\$10.00	2	50	70	DUBBING	\$11.50
444	1 1/4	46	65	DUBIOUS	12.50	2	50	72	DUBIOUSLY	14.00

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Deming Windmill Force Pump Standard

With Cog Lever Top

Will Lift and Force 35 to 200 Feet

Fig. 444½



This is a standard for hand or windmill use, equipped with cog lever top instead of plain windmill top. The gear action is well guarded to prevent accidents. The rack can be disconnected when the pump is to be operated by windmill.

The bearer is adjustable and is secured to the stock by three hook bolts. The piston rod is always in line because the stuffing-box and rod guide are made in one casting. Stuffing-box gland is brass. The spout is flanged and bolted to the standard. Hose tube and nut are regularly included. Back outlet is tapped for 1¼-inch pipe.

The pump rod is made of ¾-inch piston rod steel; is threaded 7/16-inch and is furnished with a 7/16 x 3/8-inch coupling, so that 7/16 or 3/8-inch well rod may be used.

Where there is no liability of freezing, we recommend the use of a foot valve and strainer with this standard.

Deduct \$2.50 from list price if plain spout is desired instead of cock spout.

Cylinders or working barrels for use with this standard are illustrated and listed elsewhere.

Sizes and Prices

Figure	Stroke Inches	Fitted for Pipe Inches	Height Inches	Weight Pounds	Cipher	Price
444½	6	1¼	52	75	DIVULGE	\$13.50

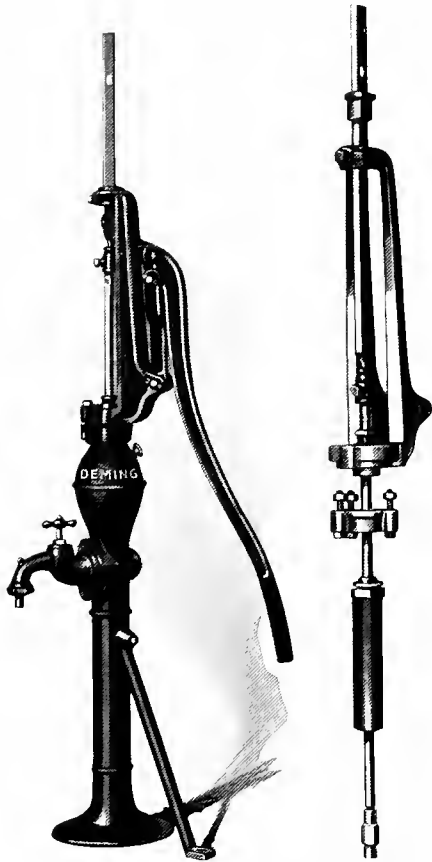
Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Windmill Force Pump Standard

With Renewable Guide Bushing and Patented Windmill Top
Will Lift and Force 35 to 200 Feet

Fig. 445



Complete View of Fig. 445

Detail View of Patent Windmill Top

This is a good heavy windmill standard suitable for operation by pump jack or windmill. The windmill top is of new design and is heavily reinforced at the points where in other pumps of this type breakage is most liable.

The detail view (illustration to the left) shows our new patented windmill top and air chamber tube. The patented feature consists of a loose ring which keeps the three bolts in place and prevents them from falling to the ground or into the well, should it be necessary to remove the top.

The bushing on the windmill slide rod can be renewed when worn. In many pumps it is necessary to buy an entire new top when the guide wears out.

Fig. 445 is tapped in the standard for 2-inch pipe. A combination bushing, however, is regularly furnished for $1\frac{1}{4}$ and $1\frac{1}{2}$ -inch pipe, thus adapting it for varying conditions. The pump rod is made of $\frac{3}{4}$ -inch piston rod steel. It is threaded $\frac{7}{16}$ -inch and is furnished with a $\frac{7}{16} \times \frac{3}{8}$ -inch coupling so that $\frac{7}{16}$ -inch or $\frac{3}{8}$ -inch rod may be used.

Where there is no liability to danger from freezing, we recommend the use of foot valve and strainer with this standard.

The spout is provided with a hose nut and tube. Deduct \$2.50 from list price if cock is not desired.

Cylinders or working barrels for use with this standard are shown and listed elsewhere.

Sizes and Prices

Figure 445	Fitted for Pipe Inches	Height Inches	Back Outlet Inches	Stroke	Weight Lbs.	Cipher	Price
Standard Complete With Cock Spout	$1\frac{1}{4}$, $1\frac{1}{2}$ and 2	52	$1\frac{1}{4}$	Adjustable 6, 8 or 10 Inches	77	DIVORCE	\$15.00

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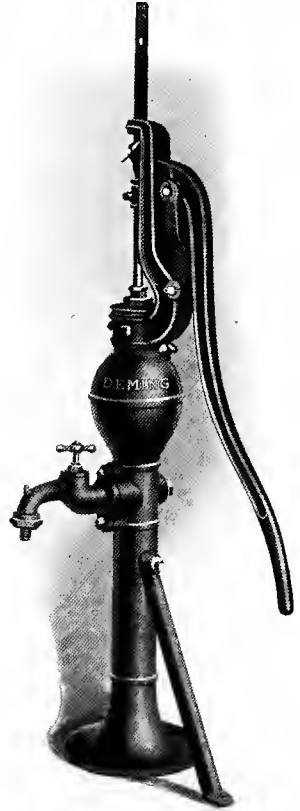


Deming Windmill Force Pump Standards

Fig. 414

With Back Outlet
Will Lift and Force
35 to 200 Feet

Fig. 424



These engravings represent our medium weight Force Pump Standards for windmill or hand use. They have revolving bearers, air chamber tube and brass packing gland. The air chamber is formed by enlarging the stock above the spout. The spout is flanged and bolted to the standard, and is fitted with hose tube and nut. The stuffing-box and air chamber tube are in one piece and are screwed into the top of the stock.

The stock is tapped for pipe near the spout for sizes given in the table below.

The pump rod is made of $\frac{3}{4}$ -inch piston rod steel, threaded $\frac{1}{16}$ -inch and is furnished with a $\frac{7}{16}$ x $\frac{3}{8}$ -inch coupling, so that $\frac{7}{8}$ or $\frac{3}{8}$ -inch rod may be used.

Where there is no liability to danger from freezing, we recommend the use of foot valve and strainer with these standards.

Fig. 424 has cock spout. Otherwise it is the same as Fig. 414.

Cylinders or working barrels for use with these standards are shown and listed elsewhere.

Sizes and Prices

Fig.	WITH SIX-INCH STROKE					WITH ADJUSTABLE STROKE—6, 8 or 10-Inch				
	Fitted for Pipe Inches	Height Inches	Weight Lbs.	Cipher	Price	Fitted for Pipe Inches	Height Inches	Weight Lbs.	Cipher	Price
414	1 $\frac{1}{4}$	46	68	DANGEROUS	\$11. 00	2	50	75	DANDRUFF	\$13. 00
424	1 $\frac{1}{4}$	46	70	DANGLED	13. 50	2	50	77	DANDIFIED	15. 50

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Windmill Force Pump Standard

With Flanged Base and Patented Bearer
Will Lift and Force 35 to 200 Feet

Fig. 441



Detail of Patent
Windmill Top

This is a very strong, durable and convenient standard. The bearer is clamped to the stock by three hook bolts. Should it become necessary for any reason to remove the bearer, the bolts will be kept in place by a loose ring, which prevents them from dropping to the ground or in the well. The detail cut explains this construction. This style of bearer is fully covered by our patents.

A separate flange between the base and the stock permits the well pipe to be easily attached. This makes it possible to remove the standard while connection is being made to the well pipe, which is a very much easier method of installing, than if the entire heavy pump had to be handled during the setting.

Fig. 441 is regularly furnished with 3/4-inch brass cased plunger rod, threaded at the bottom 7/16-inch and furnished with a 7/16 x 3/8-inch coupling so that either 7/16 or 3/8-inch steel rod may be used.

Fig. 441 has a brass packing gland. When tapped for two inch pipe and larger, our artesian well cylinders, Figs. 311 and 324 may be used to advantage in connection with this pump. Other cylinders or working barrels for use with this standard are listed elsewhere.

The bushing on the windmill slide rod can be renewed when worn. In many pumps it is necessary to buy an entire new top when the guide wears out. The heavy metal ball will be found an aid to pumping — especially if the well is very deep. Cock spout is fitted with hose nut and tube.

Fig. 441 is made with adjustable stroke only. Deduct \$2.50 if plain spout is wanted instead of cock spout.

Where there is no danger from freezing, we recommend the use of foot valve and strainer with this standard.

Sizes and Prices

Figure	*Fitted for Pipe Inches	Height Inches	Back Outlet Inches	Stroke	Weight Lbs.	Cipher	Price
441							
Standard Complete With Cock Spout	2	55	1 1/4	Adjustable 6, 8 or 10 Inch	92	DIVINING	\$16.00

*Fitted for 1 1/4, 1 1/2, 2, 2 1/2 or 3 Inch pipe, but always as listed, unless otherwise ordered.

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Deming Windmill Force Pump Standard

With Air Chamber, Cock Spout and Flanged Base
Will Lift and Force 35 to 200 Feet

Fig. 407

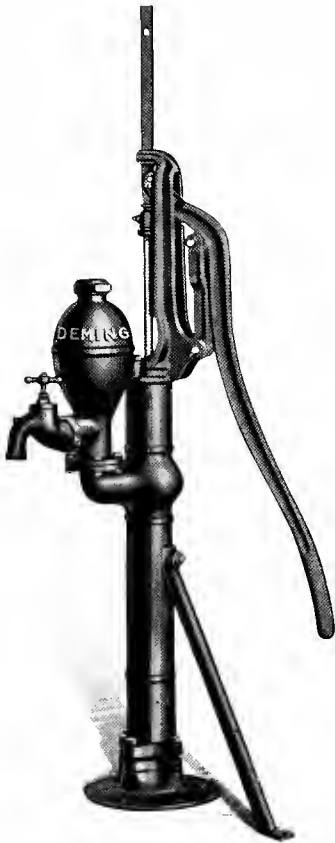


Fig. 407 has a flange for pipe, located near the base. This makes it possible to remove a large part of the pump while connection is being made to the well pipe, which is a very much easier method of installing the pump, than if the entire heavy pump had to be handled during the setting. The bolts in the air chamber are so spaced that the spout can be turned 90 degrees in either direction.

Fig. 407 has an upward and back outlet or discharge. This pump can be attached to pipe up to three inches, which especially adapts it for use with artesian well cylinders. Air chamber is fitted with a nut tapped for pipe on upward discharge.

Where there is no danger from freezing, we would recommend the use of foot valve and strainer with this standard.

Pump rod is made of $\frac{3}{4}$ -inch piston rod steel, threaded $\frac{7}{16}$ -inch at the bottom and furnished with a reducing coupling for $\frac{3}{8}$ -inch well rod.

Fitted for $1\frac{1}{4}$, $1\frac{1}{2}$, 2, $2\frac{1}{2}$ or 3-inch pipe, but always as listed, unless otherwise ordered. Extra flanges, 50 cents each.

Cylinders or working barrels for use with this standard are shown and listed elsewhere.

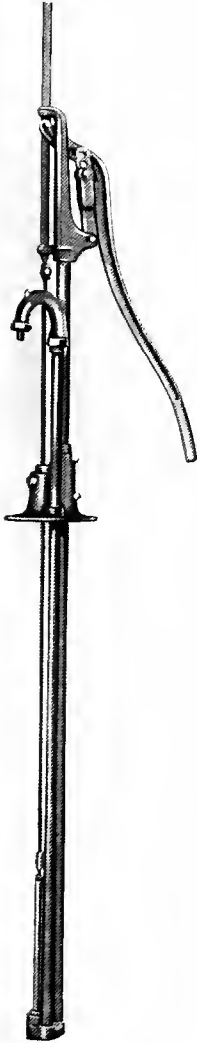
Sizes and Prices

Figure 407	WITH SIX-INCH STROKE					WITH ADJUSTABLE STROKE—6, 8 or 10-Inch				
	Fitted for Pipe Inches	Height Inches	Weight Lbs.	Cipher	Price	Fitted for Pipe Inches	Height Inches	Weight Lbs.	Cipher	Price
Standard Complete	$1\frac{1}{4}$	49	110	DEANERY	\$16.00	2	53	115	DEANSHIP	\$18.00

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Fig. 260
Plain
Windmill Top



Deming Force Pump Standards
With Adjustable Base
Will Lift and Force 35 to 200 Feet

In these pumps the standard is formed of pipe; the pipe to which the windmill top is attached, acting as an air chamber.

The differential plunger in the set length helps to make a smooth, uniform flow since the water is discharged at each stroke.

The one inch differential plunger is used instead of a stuffing box.

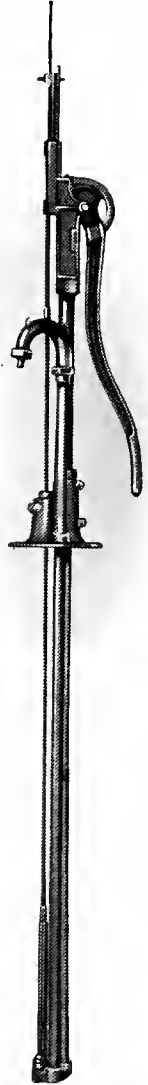
These pumps have a 1 1/4-inch air chamber pipe and 1-inch discharge pipe.

The base is adjustable so that the pump standard may be made any desired length. Fig. 258 is identical with Fig. 260, except that it is fitted with a cog lever top for hand or windmill use and with enclosed gears. The spout can be swung to the left or right. Either pump will go into 5 5/8-inch casing.

Fig. 260 is fitted with adjustable stroke lever for 6, 8 or 10-inch stroke. The cylinder is not included in the list price.

Cylinders or working barrels for use with these standards are illustrated and listed elsewhere.

Fig. 258
Cog Lever
Windmill Top



Sizes and Prices

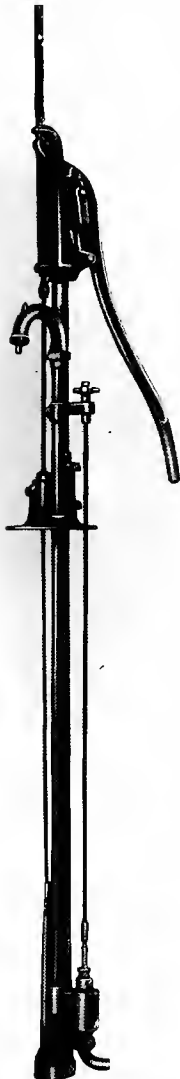
Figure	Fitted for Pipe	Stroke	Weight in Pounds	Cipher	Price
260	1 1/4	Adjustable 6, 8 or 10 Inch	60	BUSTLE	\$11.50
258	1 1/4	6 Inch Hand 10 Inch Mill	60	BUSTARD	12.50

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Deming Force Pump Standards

Fig. 261
Plain
Windmill Top



Will Lift and Force 35 to 200 Feet
With Three Way Distributing Valve

Except for the addition of the three way distributing valve for underground discharge to tank, Figs. 261 and 259 are the same as Figs. 260 and 258 on the opposite page.

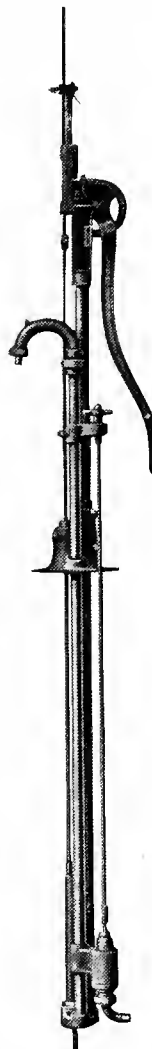
The three way valve being on the **outside** of the discharge pipe gives free passage to the water and greatly lessens the effort required for operation.

The stuffing-box for the three way valve is located **below the frost line**.

The gears on Fig. 259 are completely enclosed, making the pump entirely safe for children to operate. The cog lever insures a straight line movement of the piston rod.

The elbow on the three way valve can be turned either to the right or left as desired. The cylinder is not included in the list price.

Fig. 259
Cog Lever
Windmill Top



Sectional View of
Three Way Valve

Sizes and Prices

Figure	Fitted for Pipe Inches	Stroke	Weight in Pounds	Cipher	Price
261	1 1/4	Adjustable 6, 8 or 10 Inch	65	BUSTER	\$13.50
259	1 1/4	6 Inch Hand 10 Inch Mill	65	BUSKY	14.50

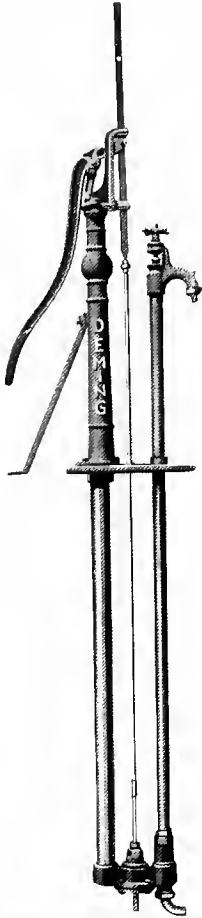
Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Anti-Freezing Windmill Force Pump Standards

With Underground Discharge
Will Lift and Force 35 to 200 Feet

Figs. 410 and 412



These pumps have been perfected to meet the requirements of the principal windmill manufacturers in the United States for better windmill force pumps with three-way valves than have heretofore been produced. They have won their reputation on their merits, are the original pumps of their class, and have been in use for more than thirty years.

The especial feature of these pumps is their distributing valve. The union elbow coupling for underground connection can be turned to suit the direction of the pipe, so that water can be discharged underground without danger from freezing. The distributing valve is operated by the hand wheel above the discharge spout.

The set length is made with 2-inch air chamber pipe, which insures ease of operation and a steady flow of water.

Fig. 410 will admit the withdrawal of valves from 2-inch tubular wells without disturbing pipe connections.

Fig. 412 will admit the withdrawal of valves from 2½ and 3-inch wells without disturbing pipe connections.

Fig. 410 and 412 are regularly fitted for 7/16-inch steel well rod and also with reducer, which makes it possible to use 3/8-inch rod if desired.

These standards are fitted for 1, 1¼, 1½, 2, 2½ or 3-inch suction pipe and ¾, 1 and 1¼-inch discharge pipe, but always as listed, unless otherwise ordered.

Cylinders or working barrels for use with these standards will be found elsewhere.

Sizes and Prices

Standard Complete as per Cut Figure	Fitted for Pipe Inches	WITH SIX-INCH STROKE			WITH ADJUSTABLE STROKE (6, 8 or 10-Inch)			
		Weight in Lbs.	Cipher	Price	Fitted for Pipe Inches	Weight in Lbs.	Cipher	Price
410	1¼ Suc. 1 Disch.	127	DEBARKED	\$18.00	2 Suc. 1 Disch.	134	DEBARKED	\$19.50
412	3 Suc. 1 Disch.	133	DABSTER	19.00	3 Suc. 1 Disch.	140	DANDELION	20.50

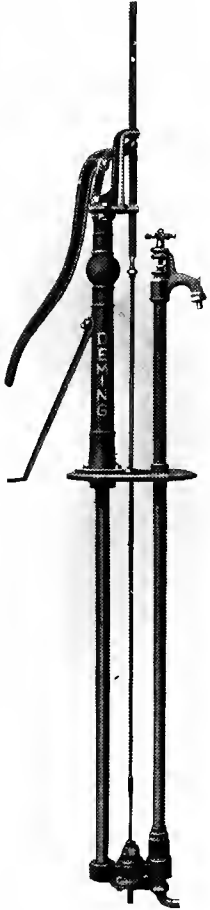
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Deming Anti-Freezing Windmill Force Pump Standard

With Underground Discharge
Will Lift and Force 35 to 200 Feet

Fig. 415



The construction of this pump is very similar to Fig. 410 shown on opposite page. It differs from Fig. 410 only in the weight and size of the air chamber pipe which is $1\frac{1}{2}$ -inch. Fig. 415 has been placed on the market to meet the increasing demand for a light and low priced pump of this type.

The plunger can be withdrawn from 2-inch tubular wells by removing the stuffing-box.

Fitted for 1, $1\frac{1}{4}$, $1\frac{1}{2}$ or 2-inch Suction Pipe and $\frac{3}{4}$, 1, or $1\frac{1}{4}$ -inch underground discharge pipe, but always as listed unless otherwise ordered.

Cylinders or working barrels for use with this standard are illustrated and listed elsewhere.

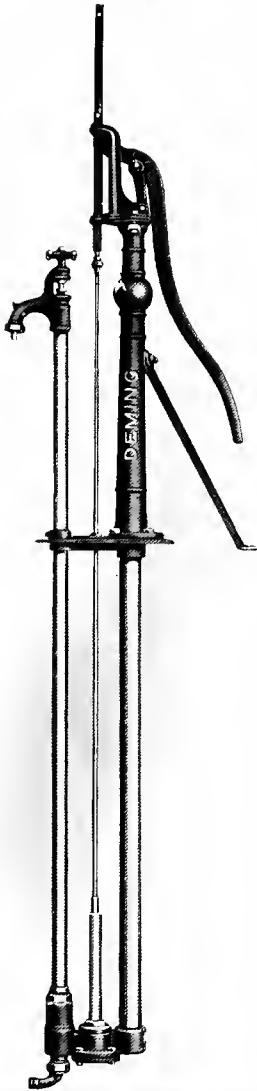
Sizes and Prices

WITH SIX-INCH STROKE				WITH ADJUSTABLE STROKE (6, 8 or 10-Inch)			
Fitted for Pipe Inches	Weight in Lbs.	Cipher	Price	Fitted for Pipe Inches	Weight in Lbs.	Cipher	Price
$1\frac{1}{4}$ Suction	122	DEBAUCH	\$17.00	2 Suction	132	DECAY	\$18.50

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Fig. 410 $\frac{1}{2}$



Deming Windmill
Force Pump
Standards

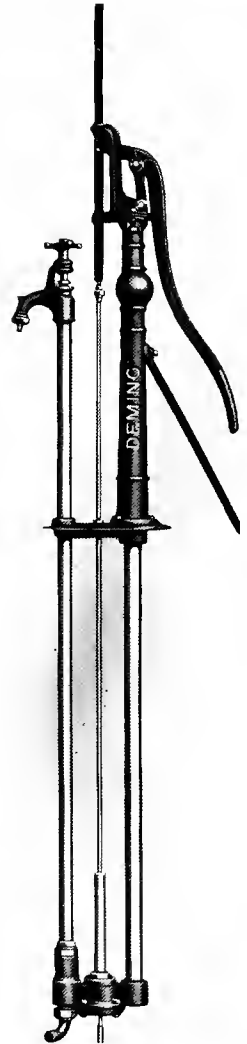
Will Lift and Force 35 to
200 Feet

With Underground Dis-
charge and Differential
Plunger

These are the same pumps as Figs. 410 and 415 shown on the two preceding pages, but with a differential plunger 1 $\frac{1}{4}$ -inches in diameter, instead of the stuffing-box and gland as shown in Figs. 410 and 415. The differential plunger with its leather cup packing is preferred by many to the stuffing-box and gland. When used with two inch tubular wells, the valves may be withdrawn without disturbing the pipe connections.

The air chamber pipe of Fig. 410 $\frac{1}{2}$ is two inches in diameter and that of Fig. 415 $\frac{1}{2}$ is 1 $\frac{1}{2}$ -inches. In all other respects these two pumps are alike. The elbow on the distributing valve may be turned any desired direction. When especially so ordered, Figs. 410 $\frac{1}{2}$ and 415 $\frac{1}{2}$ may be fitted for other sizes of suction and discharge pipe than listed.

Fig. 415 $\frac{1}{2}$



Sizes and Prices

Pump Standard as Illustrated	WITH SIX-INCH STROKE				ADJUSTABLE STROKE (6, 8 or 10-Inch)			
	Fitted for Pipe Inches	Weight Pounds	Cipher	Price	Fitted for Pipe Inches	Weight Pounds	Cipher	Price
Figure 410 $\frac{1}{2}$	1 $\frac{1}{4}$ Suc. 1 Disch.	127	DELUGE	\$19.00	2 Suc. 1 Disch.	134	DEMON	\$21.50
415 $\frac{1}{2}$	1 $\frac{1}{4}$ Suc. 1 Disch.	122	DEFEY	18.00	2 Suc. 1 Disch.	129	DELFI	20.50

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Deming Special Windmill Force Pump Standard

Will Lift and Force 35 to 200 Feet
With Underground Discharge

Fig. 408

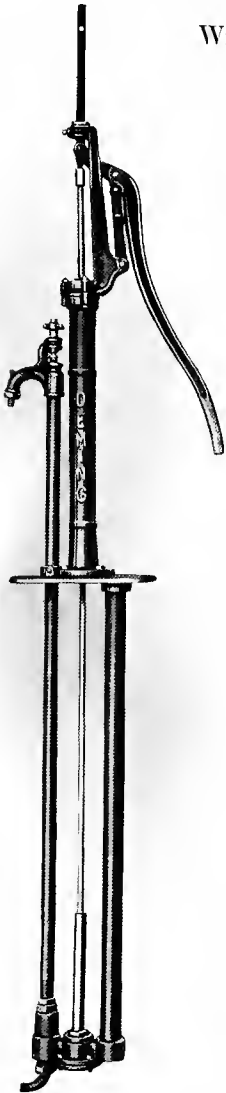


Fig. 408 has been heavily reinforced in the places which are most liable to breakage in a pump of this kind, so that it is well adapted for operation by pump jack. The stock is of the same diameter — three inches — between the two rings so that all makes of jacks can be used.

Should it be necessary to remove the bearer, the three hook bolts can be loosened and the top taken off, but the bolts are kept from dropping to the ground or into the well by the loose ring which holds them securely in place. This feature is patented.

The air chamber of Fig. 408 is two inches in diameter. A $1\frac{1}{4}$ -inch differential cylinder is furnished instead of a stuffing-box. The pump rod is $\frac{3}{4}$ -inch and is one complete rod, unbroken by couplings, except where it is coupled to the guide rod at top of pump. The bushing for the guide rod is renewable. In many pumps a complete new bearer has to be secured when the bushing wears out.

The plunger and valve may be withdrawn from two inch tubular wells after stuffing-box is removed. The union elbow coupling for underground connections can be turned to suit the direction of the pipe.

Fitted for other sizes of suction pipe when especially ordered, but we recommend that the pump be fitted for size of pipe as listed.

Cylinders or working barrels for use with this pump are listed elsewhere.

Sizes and Prices

Figure	Stroke	Suction Fitted for Pipe Inches	Underground Discharge Fitted for Pipe Inches	Weight Pounds	Cipher	Price
408	Adjustable 6, 8 or 10 Inch	$1\frac{1}{4}$	1	145	DIASPORE	\$23.00

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Deming Improved Windmill Stuffing-Box Heads With Brass-Cased Rod

Fig. 446



Fig. 447



Fig. 449



These stuffing-box heads for windmill use may be installed in shallow or deep wells, where a force pump standard would not be suitable. They are made of iron (except Fig. 449, which is all brass), with the gland of brass. Piston rod is $\frac{3}{4}$ " ; brass cased; threaded at the bottom $\frac{7}{16}$ -inch and furnished with $\frac{7}{16} \times \frac{3}{8}$ -inch coupling so that $\frac{7}{16}$ or $\frac{3}{8}$ -inch rod may be used. If ordered, Fig. 449 is fitted with coupling on both ends of the rod. Figs. 446 and 447 have windmill attachment at top, and have a discharge connection above the suction. The discharge from Fig. 449 is made by a tee attached to the suction pipe below.

Figs. 446 and 447 may be fitted for $1\frac{1}{4}$, $1\frac{1}{2}$, 2, $2\frac{1}{2}$ or 3-inch discharge pipe, but will always be fitted with same size discharge as suction pipe, unless otherwise ordered.

Cylinders or working barrels for use with these heads are shown and listed elsewhere.

Sizes and Prices

Fig.	Stroke	For $1\frac{1}{4}$ In. Pipe		For $1\frac{1}{2}$ In. Pipe		For 2 In. Pipe		For $2\frac{1}{2}$ In. Pipe		For 3 In. Pipe	
		Cipher	Price	Cipher	Price	Cipher	Price	Cipher	Price	Cipher	Price
446	12	DECAMP	\$ 5.00	DEPUTE	\$ 5.50	DERIDE	\$ 6.00	DERRICK	\$ 7.00	DESPOT	\$ 7.50
447	12	DECANTER	5.00	DEPUTY	3.50	DERMAL	6.00	DERVISH	7.00	DETER	7.50
449	12	DECAYED	4.00	DERBY	5.00	DERMIC	6.00	DESERT	7.50	DETRUDE	10.00

Approximate Weights

Figures	$1\frac{1}{4}$ In. Pipe Pounds	$1\frac{1}{2}$ In. Pipe Pounds	2 In. Pipe Pounds	$2\frac{1}{2}$ In. Pipe Pounds	3 In. Pipe Pounds
446	10	13	18	25	25
447	10	13	18	25	25
449	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	5

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CYLINDERS
OR
WORKING BARRELS
AND
PUMP LEATHERS

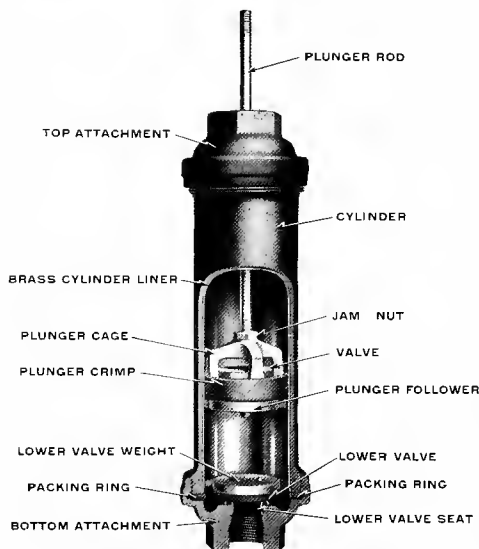
FOR
SHALLOW AND DEEP WELLS

IRON, BRASS AND BRASS-LINED
CYLINDERS, USED WITH HAND
AND WINDMILL LIFT AND
FORCE STANDARDS, POWER
WORKING HEADS, ETC. FOR
GENERAL WATER SUPPLY; THE
CYLINDER BEING USUALLY
SUBMERGED





Deming Cylinders or Working Barrels



Section of a Typical Brass-Lined Cylinder

The thought which is responsible for the old adage "A chain is no stronger than its weakest link," may be well applied when speaking of pump construction, for no pump is better than its cylinder. If the cylinder is defective, the pump is certain to be condemned.

The pump cylinder is sometimes designated as the "working barrel" or "working section" because it performs the actual work of bringing the water from the depths of the well to the surface. The pump top or standard is of secondary importance to the cylinder.

Attention is directed to the detail view on this page showing a typical cylinder. This will give a clear understanding of the location and function of each of the necessary parts of the cylinder. The engraving represents our brass-lined cylinder, Fig. 308, with leather lower valve.

We are extremely careful in the manufacture of Deming cylinders, making all parts to exact gauges so that repairs, should they be needed, will always fit. All cylinders undergo a rigid inspection before they leave our factory.

The lists on the following pages give the sizes of pipe for which the cylinders are fitted, but if other sizes of pipe are to be used, we can generally fit the cylinder attachments to suit, for which we will make an extra charge. However, we recommend that the cylinders be fitted as listed, as we have found from experience, that they are best adapted for the sizes of pipe as given in the lists. In order that the pump operates properly, all parts of the cylinder must be in perfect condition, and the joints should be air tight.

Deming Iron Cylinders

Deming iron cylinders are finished on special machines, leaving a high polish in the bore and retaining the chilled surface of the iron. This makes a cylinder which is not easily affected by rust and which wears longer than iron cylinders finished in the ordinary way. Only skilled workmen — men who have been in our employ for years — are permitted to work on Deming cylinders.

Deming Brass-Lined Cylinders

When rust accumulates on an iron cylinder, the plunger leathers are apt to become more or less affected by it. To overcome this difficulty, the brass lined cylinder was originated about 1876 and was a tremendous success right from the start. Deming brass-lined cylinders are made similar to the iron cylinders, the shell being bored out smoothly and enough to insert a piece of seamless drawn polished brass tubing which is forced into the iron shell and then expanded at both ends — "swaged" — to position. These cylinders possess the smoothness of the brass tube cylinders and are not so likely to become injured by external pressure. They will not rust, "pit" or break.

Deming Brass Tube Cylinders

Many of our customers prefer brass tube cylinders for the reason that the brass threads do not rust, and it is therefore less trouble to take off the caps when new leathers are needed or other repairs are to be made. The iron threads are likely to be rusty and offer some difficulty when the caps are to be removed. The shell of a Deming brass tube cylinder consists of a heavy seamless drawn polished brass tube with iron or brass attachments as desired.

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Plungers for Deming Cylinders or Working Barrels

The plunger constitutes a very important part of the cylinder. Great care must be exercised in the manufacture of the plunger and its valve, or the cylinder will fail to give good service. Deming plungers are constructed by workmen especially skilled in making and assembling this particular article.



"A"
(One Leather)
Plunger



"J"
(Two Leather)
Plunger



All Brass
Plunger Used
With Fig. 311



All Brass
Plunger Used
With Fig. 324

Specifications of Deming Plungers

"A" PLUNGER HAS ONE CUP LEATHER and $\frac{3}{8}$ -inch follower, as illustrated. Iron "A" plunger is regularly furnished on Deming Cylinders, Figs. 300, 308, 312, 322 and 314.

"J" PLUNGER HAS TWO CUP LEATHERS and $\frac{1}{2}$ -inch follower, as illustrated.

The "A" and "J" Plungers may be had as follows:— either all iron; or with iron follower, brass cage and valve; or all brass.

Plunger used in Fig. 311 artesian well brass cylinder has two cup leathers, and ball valve. FURNISHED REGULARLY ALL BRASS.

Plunger used in Fig. 324 artesian well brass cylinder has four cup leathers and ball valve. FURNISHED REGULARLY ALL BRASS.

Extra List Prices to be Added to Cylinder Lists, For "J" Plungers (Two Leathers)

THE LIST PRICES GIVEN BELOW ARE TO BE ADDED TO LIST PRICES OF CYLINDERS, FIGS. 300, 308, 312 AND 322, WHEN THESE CYLINDERS ARE WANTED WITH "J" PLUNGER (TWO LEATHERS), INSTEAD OF THE REGULAR "A" PLUNGER (ONE LEATHER).

FOR EXAMPLE:— If any 3-inch cylinder is wanted with an all iron "J" plunger, add 60 cents to the list price of the cylinder; if a 3-inch cylinder is desired with a "J" plunger having brass cage and valve, add \$1.50 to the list price of cylinder; if 3-inch cylinder is desired with an all brass "J" plunger, add \$2.65 to list price of the cylinder. This same formula applies to all diameters of cylinders. When "J" Plunger is furnished instead of "A" Plunger, the stroke of cylinder is reduced one inch.

Diameter Cylinder Inches	Extra List Price To be Added for Iron "J" Plunger	Extra List Price To be Added for "J" Plunger with Brass Cage and Valve	Extra List Price To be Added for All Brass "J" Plunger
2	\$0.35	\$0.85	\$ 1.35
2 $\frac{1}{4}$	.35	.95	1.75
2 $\frac{1}{2}$	.50	1.10	2.10
2 $\frac{3}{4}$	.60	1.35	2.35
3	.60	1.50	2.65
3 $\frac{1}{2}$	.75	1.65	3.50
4	.85	2.65	4.65
5	1.65	3.85	9.15
6	2.00	6.50	13.85



Deming Lower Valve and Brass Valve Seat

Special Lower Cylinder Valve, Fig. 335

Western Style



Fig. 335

The special lower cylinder valve, Fig. 335, is for use with our iron, brass-lined and brass body cylinders having OUTSIDE ATTACHMENTS, Figs. 300, 308 and 312, listed elsewhere. Any of these cylinders will be furnished with Fig. 335 when so ordered, at extra list prices given below. The poppet valve is leather faced, insuring a perfect seat. Many dealers find it desirable to carry this cage and valve in stock as an extra.

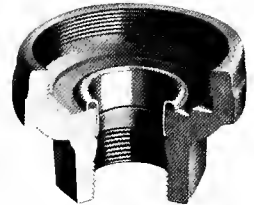
Sizes and Prices, Fig. 335

Size in inches (Diam. Cyl.)	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	4	4 1/2	5	6
Extra list added to Cyl. list.	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.60	\$0.60	\$0.75	\$0.75	\$1.00	\$1.25

Deming Brass Valve Seat

Furnished regularly on all Deming Cylinders, (except Fig. 314)

The construction of this seat is such that no particles of sand and gravel will find permanent lodgement upon it. The Deming brass valve seat is "swaged" to position—expanded at both ends—which insures its permanence. This seat is so constructed that an extra hard surface is secured for the face, making it impervious to the action of the water or the pounding of the valve. THIS SEAT IS FURNISHED REGULARLY ON ALL DEMING CYLINDERS, (except Fig. 314.)



Brass Valve Seat

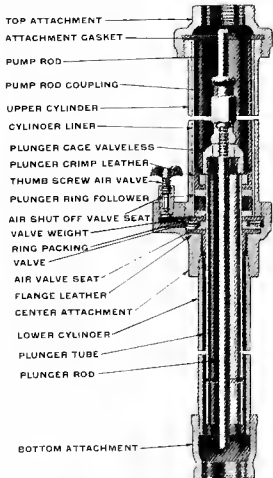


Fig. 306

Deming Improved Deep Well Air Cylinder, Fig. 306

For Pneumatic Water Supply in Connection with Compression Tank Systems

The use of compressed air tanks supplied from deep wells by windmill or other power pumping appliances has hitherto been seriously hindered by lack of a reliable contrivance to supply air for recharging the tank. This hindrance has recently been overcome by the use of an auxiliary air pumping cylinder located in the discharge pipe between the working barrel and the pumping head.

We offer the best cylinder of this type in our Fig. 306 Auxiliary Air Pumping Cylinder. The illustration shows a sectional view with an air cock in center casting. The air cock must be located above the water, or piped to some point above to prevent cylinder from pumping water instead of air.

These cylinders may be used with any size of working barrels, but we advise their use with the size of pipe for which they are fitted.

Sizes and Prices

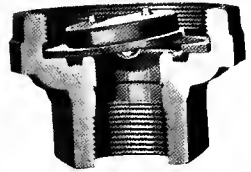
Size Pipe Fitted for Inches	Stroke Inches	Extreme Outside Width Inches	Weight Pounds	Cipher	Price	Size Pipe Fitted for Inches	Stroke Inches	Extreme Outside Width Inches	Weight Pounds	Cipher	Price
1 1/4	7	4 1/2	12	CAREFUL	\$13.50	1 1/4	14	4 1/2	14 1/2	CAROL	\$15.50
1 1/2	7	4 3/4	18	CAREER	14.50	1 1/2	14	4 3/4	21	CARNY	17.50
2	7	5 1/4	19	CARET	15.50	2	14	5 1/4	25	CAROUSE	18.50



Lower Caps and Valves for Deming Cylinders

Hinged Leather Lower Valve

The hinged leather valve which we use on all our cylinders with outside caps is too well known to require detailed description. The very best of material and workmanship is used in the construction of this valve which has for many years given the best of satisfaction.



Hinged Leather Lower Valve

Lower Cap and Disc Valve with Split Cage For Inside Capped Cylinder, Fig. 322 (Patented)

Our special leather faced disc valve with split cage is furnished regularly on our Fig. 322 inside capped cylinder. The split cage makes it impossible for the valve to get out of place when in the cylinder. The valve is very easy to remove and repair when the cap is unscrewed from the cylinder. The cage and valve are made of iron on the cylinders with iron attachments. Cylinders with brass attachments have brass cage and valve. The Deming brass valve seat is furnished on this iron lower cap.



Special Lower Cap and Disc Valve with Split Cage (Patented)

Lower Valve for Fig. 311 Artesian Well Brass Cylinder

This ball valve is made tapered to fit the lower attachment of the cylinder. As an added safeguard against leakage, it is also supplied with leather cup packing. With this construction, the valve can be drawn through the top of the cylinder without removing the attachments.



Lower Valve for Fig. 311

Lower Valve for Fig. 324 Artesian Well Brass Cylinder

This valve is in all respects similar to the valve used in the Fig. 311 cylinder except that we pack it with rings of leather which are turned to fit the cylinder, which adapts Fig. 324 for heavier duty than Fig. 311.



Lower Valve for Fig. 324



Deming Improved Iron Cylinders or Working Barrels With Outside Caps and Brass Valve Seats

Fig. 300

Fig. 300 is made with hinged leather lower valve and with Deming BRASS VALVE SEAT. The construction of the Deming brass valve seat prevents particles of sand and gravel from finding lodgement and interfering with the proper working of the valve.

If "J" or two-leather plunger is desired, add extra list price as on page 89.



Fig. 300,
with "A"
Plunger



Fig. 300,
with "J"
Plunger

Price List with "A" Plunger (One Leather)

Inside Diameter and Length Inches	Stroke Inches	Fitted for Pipe Inches	Well Rod Inches	Capacity per Stroke Gallons	Approximate Weight Pounds	Extreme Outside Diameter Inches	Price With Iron "A" Plunger (Cipher, CHILL)
2 ¹ / ₂ x 10	6	1 ¹ / ₄	3 ³ / ₈	.17	9 ¹ / ₂	3 ³ / ₄	\$ 4.35
2 ³ / ₄ x 10	6	1 ¹ / ₄	3 ³ / ₈	.206	10 ¹ / ₂	4	4.70
3 x 10	6	1 ¹ / ₄	3 ³ / ₈	.245	11	4 ¹ / ₄	5.00
3 ¹ / ₂ x 10	6	1 ¹ / ₂	7 ¹ / ₁₆	.333	14 ¹ / ₂	4 ³ / ₄	7.00
4 x 10	6	2	5 ⁵ / ₈	.435	18	5 ¹ / ₄	9.00
2 ¹ / ₂ x 12	8	1 ¹ / ₄	3 ³ / ₈	.192	11	3 ³ / ₄	6.00
2 ³ / ₄ x 12	8	1 ¹ / ₄	3 ³ / ₈	.231	12	4	6.50
3 x 12	8	1 ¹ / ₄	3 ³ / ₈	.276	13	4 ¹ / ₄	7.00
3 ¹ / ₂ x 12	8	1 ¹ / ₂	7 ¹ / ₁₆	.375	18	4 ³ / ₄	9.00
4 x 12	8	2	5 ⁵ / ₈	.489	21	5 ¹ / ₄	11.50
2 ¹ / ₂ x 14	10	1 ¹ / ₄	3 ³ / ₈	.234	12	3 ³ / ₄	6.50
2 ³ / ₄ x 14	10	1 ¹ / ₄	3 ³ / ₈	.283	12	4	7.00
3 x 14	10	1 ¹ / ₄	3 ³ / ₈	.337	14	4 ¹ / ₄	7.50
3 ¹ / ₂ x 14	10	1 ¹ / ₂	7 ¹ / ₁₆	.458	19	4 ³ / ₄	10.00
4 x 14	10	2	5 ⁵ / ₈	.598	23 ¹ / ₂	5 ¹ / ₄	13.00
5 x 14	10	2 ¹ / ₂	5 ⁵ / ₈	.935	48	6 ⁵ / ₈	22.50
2 ¹ / ₂ x 16	12	1 ¹ / ₄	3 ³ / ₈	.277	13	3 ³ / ₄	7.00
2 ³ / ₄ x 16	12	1 ¹ / ₄	3 ³ / ₈	.334	13	4	7.50
3 x 16	12	1 ¹ / ₄	3 ³ / ₈	.398	15	4 ¹ / ₄	8.00
3 ¹ / ₂ x 16	12	1 ¹ / ₂	7 ¹ / ₁₆	.542	20 ¹ / ₂	4 ³ / ₄	11.25
4 x 16	12	2	5 ⁵ / ₈	.707	24 ¹ / ₂	5 ¹ / ₄	14.50
5 x 16	12	2 ¹ / ₂	5 ⁵ / ₈	1.105	50	6 ⁵ / ₈	25.00
6 x 16	12	3	3 ³ / ₄	1.591	62	7 ⁵ / ₈	37.50

Note: Unless otherwise specified these cylinders are furnished with single leather iron "A" plungers.



Deming Improved Brass-Lined Iron Cylinders

With Outside Caps and Brass Valve Seat

Fig. 308

Fig. 308 has hinged Leather Lower Valve and Deming Brass Valve Seat. The construction of the Deming brass valve seat prevents particles of sand and gravel from finding lodgement and interfering with the proper working of the valve. See description and illustration on page 90. *Unless otherwise ordered, we furnish these cylinders with Iron "A" Plungers.*

A brass lined cylinder will not pit or rust, and presents always a smooth surface for the plunger leathers; lengthening greatly their life and insuring a full amount of water at each stroke. Except for the brass liner, this is the same cylinder as Fig. 300, illustrated on the opposite page.

If "J" Plunger (Two-Leathers) is desired instead of "A" Plunger. see page 89 for extra list prices.

Price List with "A" Plunger (One Leather)

Inside Diameter and Length Inches	Stroke Inches	Fitted for Pipe Inches	Well Rod Inches	Capacity per Stroke Gallons	Approximate Weight Pounds	Extreme Outside Diam. Inches	Price Iron Caps, Iron Plunger, (Cipher, CARSE)	Price Iron Caps, Iron Follower Brass Cage and Valve (Cipher, CASS)
2½ x 10	6	1¼	¾	.17	9½	3¾	\$ 8.00	\$ 8.50
2¾ x 10	6	1¼	¾	.206	10½	4	8.50	9.00
3 x 10	6	1¼	¾	.245	11	4¼	9.00	9.75
3½ x 10	6	1½	7/16	.333	14½	4¾	10.50	11.50
4 x 10	6	2	5/8	.435	18	5¼	13.00	15.50
2½ x 12	8	1¼	¾	.192	11	3¾	8.50	9.75
2¾ x 12	8	1¼	¾	.231	12	4	9.00	10.50
3 x 12	8	1¼	¾	.276	13	4¼	9.50	11.00
3½ x 12	8	1½	7/16	.375	18	4¾	11.25	13.75
4 x 12	8	2	5/8	.489	21	5¼	14.25	18.00
2½ x 14	10	1¼	¾	.234	12	3¾	9.25	10.50
2¾ x 14	10	1¼	¾	.283	12	4	9.75	11.25
3 x 14	10	1¼	¾	.337	14	4¼	10.25	11.75
3½ x 14	10	1½	7/16	.458	19	4¾	12.25	14.75
4 x 14	10	2	5/8	.598	23½	5¼	15.75	19.00
5 x 14	10	2½	5/8	.758	48	6¾	33.00	38.00
6 x 14	10	3	¾	.935	62	7¾	50.00	56.00
2½ x 16	12	1¼	¾	.277	13	3¾	10.25	11.75
2¾ x 16	12	1¼	¾	.334	13	4	10.75	12.25
3 x 16	12	1¼	¾	.398	15	4¼	11.25	12.75
3½ x 16	12	1½	7/16	.701	24½	4¾	13.50	16.00
4 x 16	12	2	5/8	.896	26	5¼	17.50	20.50
5 x 16	12	2½	5/8	1.105	50	6¾	35.00	42.00
6 x 16	12	3	¾	1.591	62	7¾	55.00	62.00



Fig. 308, with "A" Plunger



Fig. 308, with "J" Plunger

Note: Unless otherwise specified these cylinders are furnished with single leather iron "A" plungers as listed in first price column.



Deming Seamless Brass Body Cylinders

With Outside Caps and Brass Valve Seat

Fig. 312

On this cylinder we use our hinged leather lower valve and the famous Deming brass valve seat. For descriptions see pages 90 and 91. *Unless otherwise ordered, we furnish these cylinders with the Iron "A" Plunger, except all-brass cylinders which have all-brass plunger.*

The construction of the Deming brass valve seat prevents particles of sand and gravel from finding lodgement and interfering with the proper working of the valve.

If "J" Plunger (Two-Leathers) is wanted, add extra list price as on page 89.

Price List with "A" Plunger (One Leather)



Fig. 312, with "A" Plunger

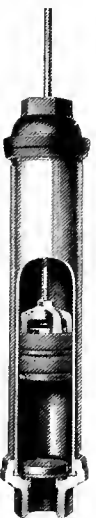


Fig. 312, with "J" Plunger

Inside Diameter and Length Inches	Stroke Inches	Fitted for Pipe Inches	Well Rod Inches	Capacity per Stroke Gallons	Approximate Weight Pounds	Extreme Outside Diam. Inches	Price Iron Caps, Iron Plunger (CIPHER, CHOK)	Price Iron Caps, Brass Cage and Valve (CIPHER, CHOCK)	Price All Brass (CIPHER, CHODE)
2 x 10	6	1	3/8	.082	7	3	\$ 7.50	\$ 8.00	\$10.75
2 1/4 x 10	6	1 1/4	3/8	.103	7 1/2	3 1/4	7.75	8.25	11.00
2 1/2 x 10	6	1 1/4	3/8	.128	8	3	8.00	8.50	12.25
2 3/4 x 10	6	1 1/4	3/8	.154	8 1/2	3 1/2	8.50	9.00	12.75
3 x 10	6	1 1/2	3/8	.184	9 1/2	4	9.00	9.75	13.50
3 1/2 x 10	6	1 1/2	7/8	.333	12	4 1/2	10.50	11.50	16.75
4 x 10	6	2	1 1/8	.435	14 1/2	5	13.00	15.50	21.50
2 x 12	8	1	3/8	.109	7 1/2	3	8.00	9.25	11.25
2 1/4 x 12	8	1 1/4	3/8	.138	8	3 1/4	8.25	9.50	11.50
2 1/2 x 12	8	1 1/4	3/8	.17	8 1/2	3	8.50	9.75	12.75
2 3/4 x 12	8	1 1/4	3/8	.206	9	3 1/2	9.00	10.50	13.25
3 x 12	8	1 1/2	3/8	.245	10	4	9.50	11.00	14.00
3 1/2 x 12	8	1 1/2	7/8	.332	12 1/2	4 1/2	11.25	13.75	17.50
4 x 12	8	2	1 1/8	.435	15 1/2	5	14.25	18.00	22.50
2 x 14	10	1	3/8	.136	10	3	8.50	9.75	13.00
2 1/4 x 14	10	1 1/4	3/8	.172	12	3 1/4	9.00	10.25	13.50
2 1/2 x 14	10	1 1/4	3/8	.213	13	3	9.25	10.50	14.75
2 3/4 x 14	10	1 1/4	3/8	.257	14	3 1/2	9.75	11.25	15.50
3 x 14	10	1 1/2	3/8	.306	16	4	10.25	11.75	16.25
3 1/2 x 14	10	1 1/2	7/8	.417	18	4 1/2	12.25	14.75	21.00
4 x 14	10	2	1 1/8	.544	25	5	15.75	19.00	26.50
1 3/4 x 16	12	1	3/8	.125	9	2	.....	.....	13.75
2 x 16	12	1	3/8	.163	11	3	9.00	10.50	13.75
2 1/4 x 16	12	1 1/4	3/8	.206	14 1/2	3 1/4	9.75	11.25	14.50
2 1/2 x 16	12	1 1/4	3/8	.255	15	3	10.25	11.75	16.00
2 3/4 x 16	12	1 1/4	3/8	.309	16	3 1/2	10.75	12.25	16.50
3 x 16	12	1 1/2	3/8	.367	17 1/2	4	11.25	12.75	17.25
3 1/2 x 16	12	1 1/2	7/8	.5	19	4 1/2	13.50	16.00	22.25
4 x 16	12	2	1 1/8	.653	26	5	17.50	20.50	28.00
5 x 17	12	2 1/2	1 5/8	1.02	50	6 1/4	35.00	42.00	53.50
6 x 17	12	3	1 3/4	1.469	64	7 1/8	55.00	62.00	75.00
1 1/2 x 20	16	1	3/8	.122	9	1 3/4	.....	.....	14.75
1 3/4 x 20	16	1	3/8	.167	10	2	.....	.....	14.75
2 x 20	16	1	3/8	.218	14 1/2	3	10.00	11.50	14.75
2 1/4 x 20	16	1 1/4	3/8	.275	16	3 1/4	11.25	12.75	16.00
2 1/2 x 20	16	1 1/4	3/8	.34	17	3	12.25	13.50	17.75
2 3/4 x 20	16	1 1/4	3/8	.411	18	3 1/2	12.75	14.25	18.50
3 x 20	16	1 1/2	3/8	.49	19	4	13.25	14.75	19.25
3 1/2 x 20	16	1 1/2	7/8	.660	21	4 1/2	16.25	19.00	25.25
4 x 20	16	2	1 1/8	.87	28	5	21.00	24.00	31.50
5 x 22	16	3	1 5/8	1.36	56	6 1/4	45.00	52.00	63.50

Note: Unless otherwise specified these cylinders are furnished with single leather iron "A" plunger as listed in first price column.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Seamless Brass Body Cylinders With Inside Caps and Special Patented Disc Lower Valve

Fig. 322

In these cylinders the top and bottom attachments screw *INSIDE* the cylinder, which brings the attachments flush with the shell of the cylinders and adapts them for use in wells of smaller diameter than the corresponding size of cylinder fitted with outside caps. *Unless otherwise ordered, we furnish the above cylinders with Iron "A" Plungers, except all-brass cylinders which have all-brass plunger.*

The Deming brass valve seat is furnished on this cylinder. Our special disc lower valve, as described on page 91, is used with this cylinder instead of the hinged leather lower valve.

If "J" Plunger (Two-Leathers) is wanted add extra list price as on page 89.

Price List with "A" Plunger (One Leather)

Inside Diameter and Length Inches	Stroke Inches	Fitted for Pipe Inches	Well Rod Inches	Capacity per Stroke Gallons	Approximate Weight Pounds	Extreme Outside Diam. Inches	Price Iron Caps Iron Plunger (CIPHER. CAUL)	Price Iron Caps, Brass Cage and Valve (CIPHER, CAVE)	Price All Brass (CIPHER, CAXON)
2 x 12	6	1	3/8	.109	5 1/2	2 1/4	\$ 8.00	\$ 9.25	\$11.25
2 1/4 x 12	6	1 1/4	3/8	.138	7	2 1/2	8.25	9.50	11.50
2 1/2 x 12	6	1 1/4	3/8	.17	7 1/2	2 3/4	8.50	9.75	12.75
2 3/4 x 12	6	1 1/4	3/8	.206	8	3	9.00	10.50	13.25
3 x 12	6	1 1/2	3/8	.245	9	3 1/4	9.50	11.00	14.00
3 1/2 x 12	6	1 1/2	7/8	.333	14	3 3/4	11.25	13.75	17.50
4 x 13	6	2	7/8	.435	18	4 1/4	14.75	18.00	22.50
2 x 14	8	1	3/8	.136	7	2 1/4	8.50	9.75	13.00
2 1/4 x 14	8	1 1/4	3/8	.172	8	2 1/2	9.00	10.25	13.50
2 1/2 x 14	8	1 1/4	3/8	.213	8 1/2	2 3/4	9.25	10.50	14.75
2 3/4 x 14	8	1 1/4	3/8	.257	9 1/2	3	9.75	11.25	15.50
3 x 14	8	1 1/4	3/8	.306	10 1/2	3 1/4	10.25	11.75	16.25
3 1/2 x 14	8	1 1/2	7/8	.417	13 1/2	3 3/4	12.25	14.75	21.00
4 x 15	8	2	7/8	.544	18	4 1/4	15.75	19.00	26.50
1 3/4 x 16	10	1	3/8	.125	6	2	.....	.....	13.75
2 x 16	10	1	3/8	.163	7	2 1/4	9.00	10.50	13.75
2 1/4 x 16	10	1 1/4	3/8	.206	8	2 1/2	9.75	11.25	14.50
2 1/2 x 16	10	1 1/4	3/8	.255	9	2 3/4	10.25	11.75	16.00
2 3/4 x 16	10	1 1/4	3/8	.309	10	3	10.75	12.25	16.50
3 x 16	10	1 1/4	3/8	.367	11	3 1/4	11.25	12.75	17.25
3 1/2 x 16	10	1 1/2	7/8	.5	14	3 3/4	13.50	16.00	22.25
4 x 17	10	2	7/8	.653	27	4 1/4	17.50	20.50	28.00
5 x 18	10	2 1/2	3/4	1.02	50 1/2	5 3/8	35.00	42.00	53.50
6 x 19	10	3	3/4	1.469	54	6 3/8	55.00	62.00	75.00
1 1/2 x 18	12	1	3/8	.107	4 1/2	1 3/4	.....	.....	14.25
1 3/4 x 18	12	1	3/8	.146	6 1/2	2	.....	.....	14.25
2 x 18	12	1	3/8	.19	8	2 1/4	9.50	11.00	14.25
2 1/4 x 18	12	1 1/4	3/8	.241	9	2 1/2	10.50	12.00	15.25
2 1/2 x 18	12	1 1/4	3/8	.298	10 1/2	2 3/4	11.25	12.75	17.00
2 3/4 x 18	12	1 1/4	3/8	.36	12	3	11.75	13.25	17.50
3 x 18	12	1 1/4	3/8	.428	15	3 1/4	12.25	13.75	18.25
3 1/2 x 18	12	1 1/2	7/8	.583	17 1/2	3 3/4	14.75	17.25	23.50
4 x 19	12	2	7/8	.762	22	4 1/4	19.25	22.25	29.75
5 x 20	12	2 1/2	3/4	1.02	51	5 3/8	40.00	47.00	58.50
6 x 21	12	3	3/4	1.469	54	6 3/8	60.00	67.00	80.00
1 1/2 x 22	16	1	3/8	.122	4 1/2	1 3/4	.....	.....	15.25
1 3/4 x 22	16	1	3/8	.167	6 1/2	2	.....	.....	15.25
2 x 22	16	1	3/8	.218	8	2 1/4	10.50	12.00	15.25
2 1/4 x 22	16	1 1/4	3/8	.275	9	2 1/2	12.00	13.50	16.75
2 1/2 x 22	16	1 1/4	3/8	.34	10 1/2	2 3/4	13.25	14.50	18.75
2 3/4 x 22	16	1 1/4	3/8	.411	12	3	13.75	15.25	19.50
3 x 22	16	1 1/4	3/8	.49	15	3 1/4	14.25	15.75	20.25
3 1/2 x 22	16	1 1/2	7/8	.67	17 1/2	3 3/4	17.75	20.50	26.75
4 x 23	16	2	7/8	.87	22	4 1/4	22.75	25.75	33.25
5 x 24	16	2 1/2	3/4	1.36	51	5 3/8	50.00	57.00	68.50
6 x 25	16	3	3/4	1.958	54	6 3/8	70.00	77.00	90.00



Fig. 322, 3" x 14" with "A" Plunger

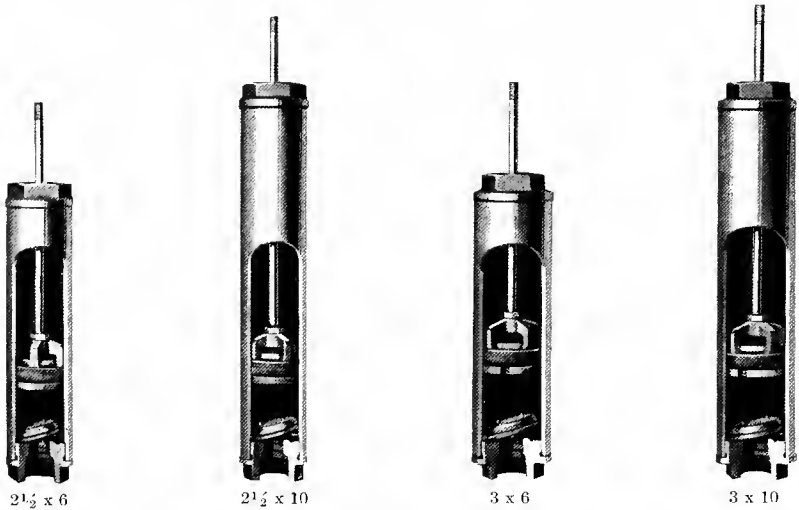


Fig. 322, 2 1/4" x 14" with "J" Plunger

Note: Unless otherwise specified these cylinders are furnished with single leather iron "A" plunger as listed in first price column.



The Deming "Whitecap" Seamless Brass Body Cylinder
 With Inside Attachment
 For Small Diameter Wells and Iron "A" Plunger
 Fig. 314



For the benefit of pump dealers, we have gotten up this special line of brass body cylinders designated as Fig. 314. These cylinders as will be seen by the specifications are made in the popular sizes — 2¹/₄-inch, 2¹/₂-inch, 2³/₄-inch and 3-inch, and in two lengths of stroke, 6-inch and 10-inch. The longer stroke cylinders are adapted for adjustable stroke windmill pumps, and as these cylinders are all made with inside attachments, they will give the greatest capacity for drilled wells of small diameters. As this is intended to be a popular line of cylinders, they are made only as listed and as shown in the engravings with iron parts excepting the brass tube shell. The cylinder attachments are all fitted for 1¹/₄-inch pipe. All details in connection with these cylinders have been carefully considered as to the convenience of the Dealer and the User. It is a thoroughly practical line of cylinders and embraces the sizes that are in most common use.

To distinguish the Deming Special "Whitecap" Brass Body Cylinders from our standard line, the Caps of these Specials will be painted white. For our standard cylinders, made in varied sizes and lengths of stroke, see other pages in this section of the Catalogue.

Price List with "A" Plunger (One Leather)

Diameter Inches	Stroke Inches	Extreme Outside Diameter Inches	For Pipe Inches	Pump Rod Inches	Capacity per Stroke Gallons	Approximate Weight Pounds	Price (Cipher, CHINE)
2 ¹ / ₄	6	2 ¹ / ₂	1 ¹ / ₄	3/8	.103	6 ¹ / ₂	\$ 7.50
2 ¹ / ₂	6	2 ³ / ₄	1 ¹ / ₄	3/8	.128	7	7.75
2 ³ / ₄	6	3	1 ¹ / ₄	3/8	.154	7 ¹ / ₂	8.00
3	6	3 ¹ / ₄	1 ¹ / ₄	3/8	.184	8 ¹ / ₂	8.25
2 ¹ / ₄	10	2 ¹ / ₂	1 ¹ / ₄	3/8	.172	7 ¹ / ₂	9.00
2 ¹ / ₂	10	2 ³ / ₄	1 ¹ / ₄	3/8	.213	8 ¹ / ₂	9.25
2 ³ / ₄	10	3	1 ¹ / ₄	3/8	.257	9 ¹ / ₂	9.50
3	10	3 ¹ / ₄	1 ¹ / ₄	3/8	.306	10 ¹ / ₂	10.25



Deming Seamless All Brass Cylinder With Inside Caps and Brass Poppet Valves

Fig. 1315

Price List with "J" Plunger (Two Leathers)

Fig. 1315 is made of brass and has "J" (two leather) plunger. The plunger and lower valve are constructed with single finger, metal faced, ground poppet valve. The lower valve has brass cage SCREWED into bottom cap. Rods are fitted with lock nuts.

Inside Diameter and Extreme Length Inches	Stroke Inches	Fitted for Pipe Inches	Well Rod Inches	Capacity per Stroke Gallons	Approximate Weight Pounds	Extreme Outside Diameter Inches	Price All Brass (Cipher, CAMEL)
2 x 22	12	1 1/4	1/2	.163	8	2 1/4	\$ 16.00
2 1/2 x 22	12	1 1/4	1/2	.255	10	2 3/4	20.00
3 x 22	12	1 1/2	1/2	.367	15	3 1/4	22.00
3 1/2 x 22	12	1 1/2	1/2	.5	20	3 3/4	28.50
4 x 23	12	2	5/8	.653	25	4 1/4	34.00
5 x 24	12	2 1/2	5/8	1.02	37	5 3/8	59.50
5 1/2 x 24	12	3	3/4	1.234	45	5 7/8	69.00
6 x 24	12	3	3/4	1.469	58	6 3/8	78.50
6 3/4 x 25	12	4	3/4	1.858	73	7 1/8	100.00
7 x 26	12	4	3/4	1.999	77	7 3/8	126.50
2 x 25	16	1 1/4	1/2	.218	9	2 1/4	17.50
2 1/2 x 25	16	1 1/4	1/2	.34	11	2 3/4	22.00
3 x 26	16	1 1/2	1/2	.49	16 1/2	3 1/4	24.50
3 1/2 x 26	16	1 1/2	1/2	.666	21 1/2	3 3/4	31.50
4 x 27	16	2	5/8	.87	27	4 1/4	37.50
5 x 27	16	2 1/2	5/8	1.36	39	5 3/8	65.00
5 1/2 x 28	16	3	3/4	1.646	48	5 7/8	75.00
6 x 28	16	3	3/4	1.958	60	6 3/8	93.00
6 3/4 x 29	16	4	3/4	2.479	77	7 1/8	107.00
7 x 30	16	4	3/4	2.666	81	7 3/8	135.00
2 x 29	20	1 1/4	1/2	.272	10	2 1/4	19.00
2 1/2 x 29	20	1 1/4	1/2	.425	12	2 3/4	24.00
3 x 30	20	1 1/2	1/2	.612	18	3 1/4	27.00
3 1/2 x 30	20	1 1/2	1/2	.833	23	3 3/4	34.00
4 x 31	20	2	5/8	1.088	29	4 1/4	40.50
5 x 31	20	2 1/2	5/8	1.7	42	5 3/8	70.00
5 1/2 x 32	20	3	3/4	2.057	51	5 7/8	81.00
6 x 32	20	3	3/4	2.448	63 1/2	6 3/8	100.00
6 3/4 x 33	20	4	3/4	3.098	81	7 1/8	115.00
7 x 34	20	4	3/4	3.332	85	7 3/8	143.00
2 x 33	24	1 1/4	1/2	.326	11	2 1/4	20.50
2 1/2 x 33	24	1 1/4	1/2	.51	13	2 3/4	26.00
3 x 34	24	1 1/2	1/2	.734	19 1/2	3 1/4	29.00
3 1/2 x 34	24	1 1/2	1/2	1.	24 1/2	3 3/4	37.00
4 x 35	24	2	5/8	1.306	31	4 1/4	44.00
5 x 35	24	2 1/2	5/8	2.04	45	5 3/8	75.00
5 1/2 x 36	24	3	3/4	2.468	54	5 7/8	87.00
6 x 36	24	3	3/4	2.938	67	6 3/8	106.50
6 3/4 x 37	24	4	3/4	3.716	85	7 1/8	122.50
7 x 38	24	4	3/4	3.998	89	7 3/8	151.00



Fig. 1315
Made only with
"J" Plunger



Bottom Attachment
for Fig. 1315.
Brass Cage
Screws onto
Bottom Cap



Deming Special Artesian Well Brass Cylinder

With Bronze Ball Valves

Fig. 311



Fig. 311 Cylinder is made of seamless drawn brass tubing with cast bronze attachments, the top attachment being threaded for standard pipe of the next size larger than the inside diameter of the cylinder, to permit the withdrawing of the plunger and lower valve without the necessity of removing the pipe and cylinder. The bottom attachment is threaded for suction pipe or strainer. The plunger and lower valve are made of bronze, with bronze ball valves, and the plunger has two cup leather packings. The plunger is provided with a steel pin connection for wood rod coupling as listed unless ordered otherwise.

These cylinders are somewhat lighter and shorter than Fig. 324 cylinders of the same diameter and stroke, though in every way equal in the high quality of material and workmanship. They are suitable for use in wells of medium depth with any power or steam-driven working head.

NOTE.—For convenience in shipping the plunger and lower valve are screwed together, and must be disconnected before cylinder is lowered in the well.

Sizes, Capacities, Prices, Etc.

Inside Diam. of Cyl. Inches	Stroke Inches	Capacity per Stroke Gallons	Pipe for Top Attachment Inches	Pipe for Bottom Attachment Inches	Extreme Length of Cyl. Inches	Extreme Outside Diam. Inches	Stem of Plunger Fitted with Pin Connection Inches	Approximate Weight Pounds	CYLINDER COMPLETE	
									Cipher	Price
1 3/4	10	.11	2	2	24	2 3/4	5/8	13	CAPTIVITY	\$17.50
1 3/4	16	.17	2	2	30	2 3/4	5/8	15	CHAMPION	19.00
2 1/4	10	.17	2 1/2	2	25	3 1/2	7/8	17	CARESS	26.00
2 1/4	16	.27	2 1/2	2	31	3 1/2	7/8	19	COLLISION	28.00
2 1/4	24	.41	2 1/2	2	39	3 1/2	7/8	22	CABOOSE	32.00
2 3/4	10	.26	3	2	26	4	7/8	23	CELEBRATED	34.00
2 3/4	16	.41	3	2	32	4	7/8	26	COLOSSAL	36.00
2 3/4	24	.61	3	2	40	4	7/8	29	CACTUS	38.00
2 3/4	30	.77	3	2	46	4	7/8	32	CADET	40.00
3 1/4	10	.36	3 1/2	2 1/2	29 1/2	4 3/4	1	30	COERCE	45.00
3 1/4	16	.57	3 1/2	2 1/2	35 1/2	4 3/4	1	33	COMMERCE	48.00
3 1/4	24	.86	3 1/2	2 1/2	43 1/2	4 3/4	1	37	CADDY	52.00
3 1/4	30	1.08	3 1/2	2 1/2	49 1/2	4 3/4	1	40	CAITIFF	55.00
3 3/4	10	.47	4	3	31	5 1/2	1 1/8	43	CAIRN	65.00
3 3/4	16	.77	4	3	37	5 1/2	1 1/8	46	CABINET	70.00
3 3/4	24	1.15	4	3	45	5 1/2	1 1/8	50	CADENZA	75.00
3 3/4	30	1.43	4	3	51	5 1/2	1 1/8	53	CALABASH	80.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



HAND AND POWER PUMPS FOR ALL USES



Deming Standard Artesian Well Brass Cylinder

Fig. 324—With Bronze Ball Valves

Fig. 324 Cylinder, or Working Barrel, is made of seamless drawn brass tubing with cast bronze top and bottom attachments, the top attachment being threaded for standard wrought iron pipe connections the next size larger diameter than the cylinder, to admit of withdrawing the plunger and lower valve. The bottom attachment is threaded for suction pipe or strainer. The plunger and check are of bronze, with bronze ball valves, and the plunger has four cup leather packings. With these cylinders we recommend using Fig. 636 wood sucker rod, listed on page 111, the plunger being provided with a steel pin connection for wood rod coupling as listed unless ordered otherwise. *For convenience in shipping, the plunger and lower valve are screwed together, and must be disconnected before cylinder is lowered in well.*

Unless otherwise specified top and bottom attachments of cylinders will always be threaded for standard pipe as listed below. *When so ordered the 5¼ inch cylinder, will be fitted for 5½ inch casing, and the 6¼ inch cylinders for 6½ inch casing.*

Sizes, Capacities, Prices, Etc.

Inside Diam. of Cyl. Inches	Stroke Inches	Capacity per Stroke Gallons	Pipe for Top Attachment Inches	Pipe for Bottom Attachment Inches	Ex-treme Length of Cyl. Inches	Ex-treme Outside Diam. Inches	Plunger Fitted with Pin Connection Inches	Ap-proximate Weight Pounds	CYLINDER COMPLETE	
									Cipher	Price
1 3/8	10	.064	1 1/2	1 1/2	28 1/2	2 3/8	5/8	11	COFFER	\$ 13.50
1 3/8	16	.103	1 1/2	1 1/2	32 1/2	2 3/8	5/8	12	COLLATOR	15.00
1 3/4	10	.104	2	2	28 1/2	2 3/4	5/8	16	COLLATE	17.50
1 3/4	16	.167	2	2	32 1/2	2 3/4	5/8	17	COLLEAGUE	19.00
2 1/4	10	.172	2 1/2	2	31	3 1/2	7/8	21	COLLATING	26.00
2 1/4	16	.275	2 1/2	2	35	3 1/2	7/8	23	COLLEGGAN	28.00
2 3/4	10	.257	3	2	38	4 1/8	7/8	32	COLLECT	34.00
2 3/4	16	.411	3	2	42	4 1/8	7/8	34	COLLIDE	36.00
2 3/4	24	.617	3	2	59	4 1/8	7/8	37	COLLODION	38.00
2 3/4	30	.771	3	2	56	4 1/8	7/8	39	COLUMBINE	40.00
3 1/4	10	.359	3 1/2	2 1/2	37	4 3/4	1	43	COLIC	45.00
3 3/4	16	.575	3 1/2	2 1/2	43	4 3/4	1	45	COLLIERY	48.00
3 3/4	24	.862	3 1/2	2 1/2	51	4 3/4	1	48	COLLUDE	52.00
3 3/4	30	1.077	3 1/2	2 1/2	57	4 3/4	1	50	COMATOSE	55.00
3 3/4	36	1.294	3 1/2	2 1/2	63	4 3/4	1	52	COMEDY	58.00
3 3/4	10	.478	4	3	41	5 1/2	1 1/8	59	COLLARING	65.00
3 3/4	16	.765	4	3	45	5 1/2	1 1/8	62	COLLECTIVE	70.00
3 3/4	24	1.147	4	3	53	5 1/2	1 1/8	66	COLLUSION	75.00
3 3/4	30	1.434	4	3	59	5 1/2	1 1/8	69	COMBAT	80.00
3 3/4	36	1.722	4	3	65	5 1/2	1 1/8	72	COMFORT	85.00
4 1/4	10	.980	4 1/2	3	46 1/4	6	1 1/8	81	COLISEUM	90.00
4 1/4	24	1.473	4 1/2	3	54 1/4	6	1 1/8	87	COLOGNE	95.00
4 1/4	30	1.842	4 1/2	3	60 1/4	6	1 1/8	92	COMBINED	100.00
4 1/4	36	2.210	4 1/2	3	66 1/4	6	1 1/8	97	COMICAL	105.00
4 3/4	24	1.840	5	3	56 1/4	6 1/2	1 1/8	105	COLONIAL	135.00
4 3/4	30	2.300	5	3	62 1/4	6 1/2	1 1/8	110	COMBING	142.50
4 3/4	36	2.760	5	3	68 1/4	6 1/2	1 1/8	115	COMMA	150.00
5 1/4	24	2.248	6	3 1/2	57 1/4	7 1/2	1 1/8	124	COLUMBIAN	160.00
5 1/4	30	2.810	6	3 1/2	63 1/4	7 1/2	1 1/8	130	COMMANDING	170.00
5 1/4	36	3.377	6	3 1/2	69 1/4	7 1/2	1 1/8	137	COMMUTING	180.00
5 3/4	24	2.696	6	3 1/2	57 1/4	7 1/2	1 1/8	148	COMBATANT	195.00
5 3/4	30	3.372	6	3 1/2	63 1/4	7 1/2	1 1/8	156	COMEDIAN	207.50
5 3/4	36	4.044	6	3 1/2	69 1/4	7 1/4	1 1/8	164	COMMANDEER	217.50
6 1/4	24	3.186	7	4	60 1/4	8 3/8	1 1/2	205	COMBINER	250.00
6 1/4	30	3.984	7	4	66 1/4	8 3/8	1 1/2	212	COMMENTED	260.00
6 1/4	36	4.780	7	4	72 1/4	8 3/8	1 1/2	220	COMPARED	275.00
6 3/4	24	3.916	7	4	61 1/4	8 7/8	1 1/2	253	COMBINE	300.00
6 3/4	30	4.677	7	4	67 1/4	8 7/8	1 1/2	261	COMBINING	320.00
6 3/4	36	5.576	7	4	73 1/4	8 7/8	1 1/2	269	COMPARATIVE	335.00
7 1/4	24	4.900	8	4 1/2	72	9 7/8	1 1/2	290	COMFORTED	450.00
7 1/4	30	6.126	8	4 1/2	78	9 7/8	1 1/2	310	COMMITTED	480.00
7 3/4	36	7.348	8	4 1/2	84	9 7/8	1 1/2	330	CONSTRUED	500.00
8 1/2	24	5.880	9	5	72	11	1 1/2	295	COMIC	725.00
8 1/2	30	7.350	9	5	78	11	1 1/2	320	COMMON	775.00
8 1/2	36	8.820	9	5	84	11	1 1/2	345	CONSTRUCTED	825.00
9 1/2	24	7.334	10	6	72	12	1 1/2	525	COMICALITY	915.00
9 1/2	30	9.180	10	6	78	12	1 1/2	540	COMMUNE	955.00
9 1/2	36	11.000	10	6	84	12	1 1/2	555	CONSTRUCTING	1000.00





Double-Acting Deep Well Cylinder With Bronze Ball Valves

Fig. 1324

Fig. 1324 Cylinder is recommended for installation when the capacity required is greater than can be obtained by the use of a single-acting cylinder.

The inner cylinder is of heavy seamless drawn brass tubing, while the outer casing is of galvanized pipe, and the ball valves, cages and plunger are of brass. The plunger can be readily withdrawn for renewing the leathers without removing the drop pipe.

In operation the water is discharged on up-stroke through discharge valve "D1," which is located in the top of pump plunger. "D2" is the Discharge Valve on down stroke. "S1" is the Suction Valve on down stroke. "S2" is the Suction Valve on up stroke.

This type of pump requires special Fig. 1325 couplings on pump rod, which rod should be extra strong pipe of sizes specified.

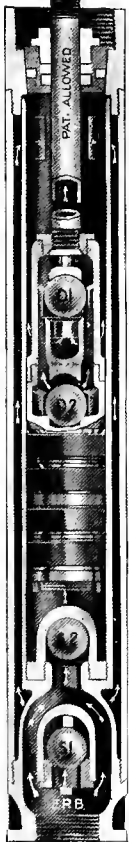


Fig. 1324, Sizes, Capacities, Prices, Etc.

Inside Diam. of Cyl. Inches	Stroke Inches	Capacity per Rev. Gallons	Pipe for Top Attachment Inches	Pipe for Bottom Attachment Inches	Extreme Length of Cyl. Inches	Extreme Outside Diam. Inches	Sucker Rod Pipe Inches	CYLINDER COMPLETE	
								Cipher	Price
2 1/4	24	.72	2 1/2	1 1/2	58	3 1/2	3/4	COTILLION	\$ 50.00
2 3/4	24	1.11	3	2	59	4	3/4	COTLAND	75.00
3 1/4	24	1.58	3 1/2	2	60	4 1/2	1	COTSWOLD	100.00
3 3/4	24	2.16	4	2 1/2	60	5	1 1/4	COTTA	125.00
3 3/4	36	3.2	4	2 1/2	72	5	1 1/4	COTTAGE	130.00
3 3/4	48	4.32	4	2 1/2	84	5	1 1/4	COTTAGER	135.00
4 1/4	24	2.82	4 1/2	3	62	5 5/8	1 1/4	COTTISE	150.00
4 1/4	36	4.23	4 1/2	3	74	5 3/8	1 1/4	COTTISED	155.00
4 1/4	48	5.64	4 1/2	3	86	5 3/8	1 1/4	COTTON	160.00
4 3/4	24	3.46	5	3 1/2	66	6 3/8	1 1/2	COTTONADE	225.00
4 3/4	36	5.19	5	3 1/2	78	6 3/8	1 1/2	COTTREL	235.00
4 3/4	48	6.92	5	3 1/2	90	6 3/8	1 1/2	COUCH	245.00
5 1/4	24	4.95	6	4	70	7 5/8	2	COUCHED	275.00
5 3/4	36	7.42	6	4	82	7 3/8	2	COUCHING	285.00
5 3/4	48	9.90	6	4	94	7 3/8	2	COUCHANT	295.00
6 1/2	24	6.45	7	4 1/2	72	8 3/8	2	COUCHEE	375.00
6 1/2	36	9.67	7	4 1/2	84	8 3/8	2	COUDEE	385.00
6 1/2	48	12.90	7	4 1/2	96	8 3/8	2	COUGAR	395.00
7 1/2	24	8.50	8	5	75	9 3/8	2	COULTER	575.00
7 1/2	36	12.75	8	5	87	9 3/8	2	COUNCIL	585.00
7 1/2	48	17.00	8	5	99	9 3/8	2	COUNT	595.00
8 1/2	24	10.66	9	6	80	10 3/4	2 1/2	COUNTED	675.00
8 1/2	36	16.00	9	6	92	10 3/4	2 1/2	COUNTING	750.00

Fig. 1325, Sucker Rod Guide Couplings

These couplings are used on pump rods to guide them and to distribute the water during its ascent.

NOTE.—Rod pipe should be extra strong and be connected with guide couplings.

When the total head exceeds 150 feet, the Fig. 1325 Guide couplings should be used at intervals of not more than 10 or 12 feet.



Size of Cylinder Inches	Price of Couplings Each	Size of Cylinder Inches	Price of Couplings Each	Size of Cylinder Inches	Price of Couplings Each
2 1/4	\$1.25	4 1/4	\$3.50	7 1/2	\$6.85
2 3/4	1.80	4 3/4	4.10	8 1/2	7.50
3 1/4	2.25	5 1/4	5.00
3 3/4	3.00	6 1/2	6.00

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Deming Double-Acting Irrigating Cylinder

Will Lift and Force 50 to 100 Feet

Fig. 319



When used as a force pump with working heads Figs. 434 or 439, either of the two smaller sizes of this cylinder will give satisfaction. The two larger sizes (4 and 6-inch diameter) are adapted for Fig. 435 working head when used as a force pump.

In connection with well constructed, powerful windmills, Fig. 319 cylinders in wells 10 to 30 feet deep, will give excellent service for irrigating purposes, as they are absolutely double-acting, discharging water on each stroke. Fig. 319 has solid piston with double cupped leather packing and leather valves. The cylinder caps are bolted, making it possible to easily gain access to the plunger and valves. This cylinder is very simple in construction.

Sizes and Prices

Inside Diam. of Cylinder Inches	Stroke Inches	Total Length Inches	Size Plunger Rods Inches	Suction and Discharge for Pipe Gallons	Capacity per Stroke (Rev.) Inches	Weight Pounds	IRON		BRASS-LINED	
							Cipher	Price	Cipher	Price
2 1/4	7	17 1/2	5/8	1 1/4	.24	25	COFFEE	\$10.00	CLANDESTINE	\$11.00
2 1/4	12	22 1/2	5/8	1 1/4	.41	40	COCHINEAL	12.50	CLANKING	14.00
3	7	20 1/2	5/8	1 1/2	.43	42	COGENT	12.00	CLAPBOARD	13.50
3	12	25 3/4	5/8	1 1/2	.73	50	COCKSCOMB	16.00	CLASHING	18.00
4	7	22 1/4	3/4	2	.76	65	COGENCY	15.00	CLAVIER	17.00
4	12	27 1/4	3/4	2	1.30	80	COFFIN	18.00	CLIENT	22.00
6	16	32 1/2	7/8	3	3.92	195	COIFFURE	35.00	CLIENTAGE	42.00

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Deming Windmill Irrigating Cylinder

For Wells 100 Feet Deep or Less

Fig. 380

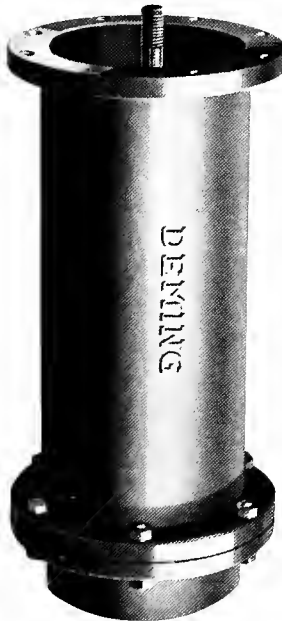
This cylinder is intended for operation by windmill or other power to raise water in large quantities for irrigation or drainage. It may be used in connection with any of our power working heads.

A discharge spout may be arranged by bolting a standard pipe flange to a box or wooden trough and connecting the discharge pipe to it. When cylinders are operated by windmills, such arrangements are very generally used.

Unless otherwise ordered, we fit both suction and discharge pipe for wrought iron pipe as listed. The top flange of the cylinder is regularly drilled for Abendroth and Root Spiral Riveted Pipe, as listed below. "Nominal Inside Diameter" mentioned in table below, refers to the diameter of Spiral Riveted Pipe, through which the plunger can be drawn.



For Wrought Iron Pipe



For Spiral Riveted Pipe
(Flange of Cylinder Fits Flange of Pipe)



Plunger



Lower Valve

Sizes and Prices

Nom'l Inside Diam. Inches	Actual Inside Diam. Inches	Length of Stroke Inches	Total Length Inches	Flange for Iron Pipe	Ex-treme Outside Diam. Inches	Size Plunger Rod Inches	Nom'l Cap. per Stroke Gals.	Weight Pounds	IRON		BRASS-LINED	
									Cipher	Price	Cipher	Price
5	4 5/8	16	26	2 1/2	8	7/8	1 1/4	100	CAZIC	\$19.00	CAWKY	\$25.00
6	5 3/4	16	26	4	9	7/8	1 3/4	125	CEDRY	22.50	CELT	30.00
8	7 3/8	16	26	6	11	7/8	3 1/4	180	CELLA	31.00	CENSE	41.00
10	9 3/8	16	26	8	14	1 1/4	5 1/4	280	CHOWDER	45.00	CASSINO	57.00
12	11 1/2	16	34	8	16	1 1/2	7 3/4	400	CACHET	65.00	CADDICE	90.00
6	5 5/8	24	34	4	9	7/8	3	150	CARPEL	25.00	CARRYALL	37.00
8	7 1/4	24	34	6	11	7/8	5	225	CARPOLITE	33.00	CARTILAGE	49.00
10	9 3/8	24	34	8	14	1 1/4	7 7/8	375	CARPUS	53.00	CASCADE	71.00
12	11 1/2	24	42	8	16	1 1/2	11 3/8	600	CARPACK	75.00	CASEMENT	112.50

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Deming "Marine" Irrigating Pumps

Will Lift 20 Feet

Fig. 475

With Bottom Suction

Fig. 476

With Side Suction

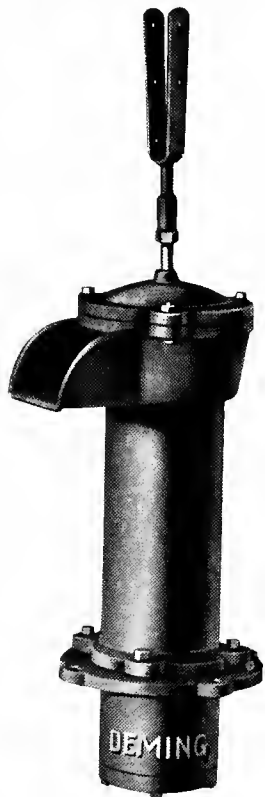


Fig. 475 is adapted for raising large quantities of water, short distances, with windmill or other power. It has a flanged base to fasten to platform or foundation. The bottom flange is threaded for suction pipe. The plunger can be withdrawn after removing the top cap. The plunger valve is metal, leather faced.

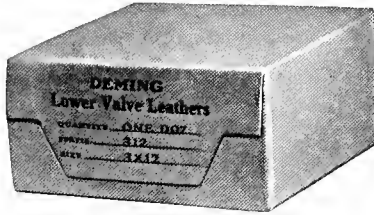
Fig. 476 is like Fig. 475 except that it is made with a tall base and has a flange at one side threaded for suction pipe.

Sizes and Prices

Fig.	Diam. of Cylinder Inches	Length of Stroke Inches	Suction Fitted for Pipe Inches	Capacity per Stroke Gallons	Weight Pounds	IRON CYLINDER		BRASS-LINED CYLINDER	
						Cipher	Price	Cipher	Price
475	6	12	3	1½	125	CACKLER	\$ 25.00	CALIPH	\$ 33.00
475	8½	12	4	3	215	CAJOLE	35.00	CALLIPE	45.00
475	12	16	6	7¾	520	CABBLING	105.00	CABOB	130.00
476	6	12	3	1½	145	CABESSE	28.00	CABOTAGE	36.00
476	8½	12	4	3	270	CABRIRIC	40.00	CABURN	50.00
476	12	16	6	7¾	540	CABLET	115.00	CACAO	140.00



Deming Oak Tanned Pump Leathers Packed in Cartons of One Dozen Each



Showing Carton of One Dozen
Lower Valve Leathers



Showing Carton of One Dozen
Cup Plunger Leathers

Good leathers are just as essential to the success of a cylinder as a good cylinder is essential to the success of a pump. By some manufacturers, very little attention is given to the matter of leathers, although it is a subject of supreme importance, since much depends upon the performance of the leathers.

It is possible to buy pump leathers at a very low price, made up from scrap or clippings, but in the manufacture of Deming leathers, we use only the very highest grade of material. We buy the full sides from a tannery which makes a specialty of pump leather, and cut our own plungers and valve leathers, washers, etc. As the sides are especially treated for us, durability is assured, and by cutting them ourselves, we secure absolute accuracy. We have been cutting our own pump leathers for more than thirty years.

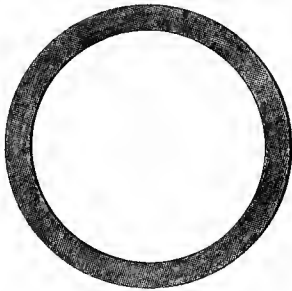
Deming cup and valve leathers are packed in pasteboard cartons. Dealers find these cartons to be very convenient. The kind, quantity and size of leathers contained are printed plainly on the front of each box so that the leather inventory can be taken at a glance. Being square cornered, these cartons will not roll around on the shelves and can be stacked one above the other.

Complete Price Lists are given on the opposite page for lower valve leathers, ring packings, flat plunger leathers and cup or crimped plunger leathers.

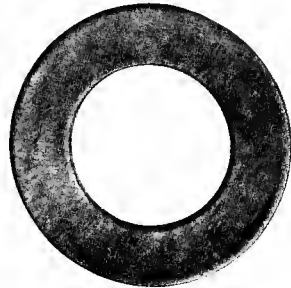
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Deming Oak Tanned Pump Leathers
For Standard Deming Cylinders



Ring Packing



Flat Plunger Leather



Lower Valve Leather



Cup or Crimped Leather

Price List Per 100

Inside Diameter of Pump Cylinder Inches	Cupped Plunger Leathers (Furnished with Our Regular Iron, Brass Lined and Brass Tube Cylinders)	Canvas Cups (For Spray and Special Fitted Pumps)	Flat Plunger Leathers	Lower Valve Leathers	Ring Packing	CUP LEATHERS FOR ARTESIAN WELL CYLINDERS — FIGS. 311 AND 324	
						Inside Diameter of Pump Cylinder Inches	Price Per 100
1	\$ 2.45	.....	.....	.....	.....	1 ³ / ₈	\$ 5.50
1 ¹ / ₄	3.15	.....	.....	.....	.....	1 ³ / ₄	6.60
1 ¹ / ₂	4.15	\$ 4.15	.....	.....	.....	2 ¹ / ₄	9.40
1 ³ / ₄	5.55	5.55	.....	.....	.....	2 ³ / ₄	12.85
2	6.25	6.25	\$ 4.50	\$ 4.50	\$ 3.15	3 ¹ / ₄	16.65
2 ¹ / ₄	6.95	6.95	5.50	5.50	3.50	3 ³ / ₄	27.40
2 ¹ / ₂	9.00	9.00	5.90	5.90	4.20	4 ¹ / ₄	36.00
2 ³ / ₄	10.50	10.50	7.00	7.00	4.85	4 ³ / ₄	49.00
3	11.50	11.50	7.30	7.30	5.55	5 ¹ / ₄	62.50
3 ¹ / ₄	12.85	12.85	9.00	9.00	6.60	5 ³ / ₄	76.40
3 ¹ / ₂	17.00	17.00	10.75	10.75	8.00	6 ¹ / ₄	90.00
4	21.85	21.85	12.50	12.50	9.00	6 ³ / ₄	104.00
4 ¹ / ₂	27.75	.....	14.50	14.50	10.50	7 ³ / ₄	132.00
5	34.00	34.00	18.00	18.00	13.25	8	139.00
6	50.00	50.00	24.50	24.50	17.40	8 ¹ / ₂	160.00
8	115.00	.....	.....	.....	.....	9 ¹ / ₂	205.00
8 ¹ / ₂	130.00	10	222.00
10	175.00	10 ¹ / ₂	243.00
12	255.00	11	264.00
.....	11 ¹ / ₂	285.00
.....	12	305.00

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Deming "Eureka" All Brass Tubular Well Cylinder With Brass Poppet Valves

Fig. 323

These cylinders are made of seamless drawn brass tubing with brass poppet valves. The plunger has two cupped leather packings. At the lower end of the cylinder a rubber ring packing is held in place with a spring dog coupling. These cylinders can be used in rough pipe after the well has been made.

With the seating tool attached to the well rod, the cylinder is forced into place where the spring dogs will hold the lower end, so that the cylinder can be turned with the seating tool, thus expanding the rubber packing and securely fixing the cylinder in the well. The upper end of the seating tool is threaded for 1-inch pipe.



Seating Tool for "Eureka" Brass Cylinder



Sizes and Prices

Size of Well Inches	Inside Diameter Inches	Stroke Inches	Approximate Weight Pounds	COMPLETE WITH TWO LEATHER PLUNGERS		SEATING TOOL FOR FIG. 323	
				Cipher	Price	Cipher	Price
2	1 13/16	12	6 1/4	COMPUTE	\$ 6.40	CONSUL	\$ 0.60
2	1 15/16	16	7	COMRADE	7.60		
2 1/2	2 1/4	12	8 3/4	CONATUS	11.00	COOK	.90
2 1/2	2 1/4	16	9 1/4	CONCH	12.50		
3	2 3/4	12	11 1/2	CONCUR	15.00		
3	2 3/4	16	12 1/2	CONDER	17.00	COOKY	1.20
3 1/2	3	12	18	CONDOG	30.00		
3 1/2	3	16	19 3/4	CONDOR	33.00		
4	3 1/2	16	25 1/4	CONE	36.00		
4	3 1/2	24	27	CONFAB	42.00	COOL	2.40
4 1/2	4	16	34 1/2	CONFER	50.00		
4 1/2	4	24	36 1/4	CONFIT	58.00		
5	4 1/2	24	42 1/2	CONFIX	60.00	COOLIE	6.00
5	4 1/2	36	46	CONGE	80.00		
6	5 1/2	24	50	CONGO	112.00	COOMB	8.00
6	5 1/2	36	55	CONIC	136.00		
7	6 1/2	24	60	CONITE	180.00	COOP	10.00
7	6 1/2	36	65	CONNER	220.00		
8	7 7/16	36	70	CONNY	360.00	COOT	12.00
8	7 7/16	42	80	CONOID	400.00		

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



PIPE, SUPPLIES
AND
PUMP FIXTURES

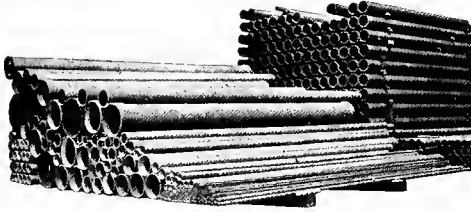
VARIOUS ACCESSORIES

INCLUDING STRAINERS, FLOAT,
CHECK AND FOOT VALVES; AIR
CHAMBERS, ROD COUPLINGS,
DRIVE POINTS, PIPE AND FIT-
TINGS, SINKS, BRASS GOODS,
HOSE, PUMP FITTERS' TOOLS,
OIL AND GREASE
CUPS, ETC.





Standard Weight and Extra Strong "Spellerized" Steel Pipe Black and Galvanized



"SPELLERIZING"

In order to lessen the natural tendency of pipe to corrode, all sizes of "NATIONAL" Pipe below 4 inches are "Spellerized." This is a special roll-knobbling process whereby the heated bloom is subjected to the action of rolls having regularly shaped projections on their working surfaces, and then to the action of smooth-faced rolls. These successive operations are repeated until a uniform and dense texture is obtained, the metal as a consequence becoming better adapted to resist corrosion, especially in the form of pitting.

"Spellerizing" is NOT a mere experiment, but after several years in actual service, results have proved the value of uniform material for pipe, and this is the effect of "Spellerizing."

The larger sizes of pipe are also uniform in texture as the result of special manufacturing processes, but the smaller sizes only are "Spellerized" to counteract the greater danger from corrosion to the thinner walls.

We carry large stocks of all sizes up to and including 4 inches, and can make shipment the same day order is received.

REVISED LISTS, ADOPTED JANUARY 1, 1913. SIZES, WEIGHTS, ETC.

STANDARD PIPE					DIMENSIONS OF STANDARD PIPE COUPLINGS		
Nominal Size Inches	Price Per Foot Black or Galvanized	Actual Outside Diameter	Nominal Weight Per Foot Pounds	No. Threads Per Inch	Size Pipe Inches	Outside Diameter Inches	Length Inches
1/8	.055	.405	.24	27	1/8	4 1/8	1 1/8
1/4	.06	.54	.42	18	1/4	4 3/8	1
3/8	.06	.675	.56	18	3/8	4 1/2	1 1/4
1/2	.085	.84	.85	14	1/2	4 5/8	1 1/2
3/4	.115	1.05	1.13	14	3/4	4 7/8	1 5/8
1	.17	1.315	1.67	11 1/2	1	4 7/8	1 3/4
1 1/4	.23	1.66	2.27	11 1/2	1 1/4	5 1/8	2
1 1/2	.275	1.9	2.71	11 1/2	1 1/2	5 1/4	2 1/4
2	.37	2.37	3.65	8	2	5 3/4	2 3/4
2 1/2	.585	2.87	5.79	8	2 1/2	6 1/8	3 1/8
3	.765	3.5	7.57	8	3	6 1/4	3 3/8
3 1/2	.92	4.0	9.10	8	3 1/2	6 3/4	3 3/8
4	1.09	4.5	10.79	8	4	6 7/8	3 1/4
4 1/2	1.27	5.0	12.54	8	4 1/2	7 1/8	3 5/8
5	1.48	5.56	14.61	8	5	7 1/4	3 5/8
6	1.92	6.62	18.97	8	6	7 3/4	3 1/2
7	2.38	7.62	23.54	8	7	8 1/8	4
8	2.88	8.62	28.55	8	8	9 3/8	4

X STRONG PIPE

Nominal Size Inches	Price Per Foot	Actual Outside Diameter	Nominal Inside Diameter	Nominal Weight Per Foot Pounds	Nominal Size Inches	Price Per Foot	Actual Outside Diameter	Nominal Inside Diameter	Nominal Weight Per Foot Pounds
1/8	.12	.405	.215	.314	2 1/2	.77	2.87	2.323	7.661
1/4	.075	.54	.302	.535	3	1.03	3.5	2.90	10.252
3/8	.075	.675	.423	.738	3 1/2	1.25	4.0	3.364	12.505
1/2	.11	.84	.546	1.087	4	1.50	4.5	3.826	14.983
3/4	.15	1.05	.742	1.473	4 1/2	1.80	5.0	4.29	17.611
1	.22	1.315	.957	2.171	5	2.08	5.56	4.813	20.778
1 1/4	.30	1.66	1.278	2.996	6	2.86	6.62	5.761	28.573
1 1/2	.365	1.9	1.50	3.631	7	3.81	7.62	6.625	38.048
2	.505	2.37	1.939	5.022	8	4.34	8.62	7.625	43.388

The permissible variation in weight is 5 per cent. above and 5 per cent. below.

Furnished with threads and couplings and in random lengths unless otherwise ordered.

For cut lengths, an extra charge will be made above random lengths.

For pipe smoothed on the inside, known as reamed and drifted, an extra charge will be made above standard pipe.

For galvanized, or coated pipe, an extra charge will be made above black.














Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



HAND AND POWER PUMPS FOR ALL USES



Revised Price List of Pipe Fittings

Sizes, Inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	
Elbows, Malleable, 45°	\$.08	\$.10	\$.12	\$.18	\$.26	\$.36	\$.54	\$.82	1.25	2.50	3.25	4.50	5.25	6.00	7.50	
Elbows, Galvanized, 45° . . . . .	.12	.15	.20	.25	.40	.50	.85	1.35	1.90	3.75	4.75	6.75	9.00	11.00		
Elbows, Malleable . . . . .	.07	.08	.10	.15	.22	.25	.35	.50	.90	1.50	2.25	3.00				
Elbows, Galvanized . . . . .	.09	.11	.14	.20	.32	.40	.60	.90	1.50	2.60	3.75	5.00				
Street Elbows, Malleable . . . . .	.10	.10	.12	.20	.25	.40	.55	.90	1.50	2.25	3.50					
Street Elbows, Galvanized . . . . .	.12	.12	.15	.28	.35	.55	.80	1.30	2.25	3.50						
Tees, Malleable . . . . .	.08	.09	.11	.15	.25	.30	.45	.60	1.05	1.70	2.50	3.40				
Tees, Galvanized . . . . .	.10	.13	.16	.20	.38	.50	.70	1.00	1.90	3.00	4.25	5.75				
Crosses, Malleable . . . . .	.09	.10	.16	.20	.30	.40	.60	1.00	1.75	3.00	3.25	5.25				
Crosses, Galvanized . . . . .			.25	.29	.45	.60	.90	1.50	2.75	4.50	8.00					
Couplings, Wrought . . . . .	.05	.06	.07	.10	.13	.17	.21	.28	.40	.60	.80	1.00	1.50	1.65	2.40	
Couplings, Galvanized . . . . .	.06	.08	.10	.13	.18	.25	.32	.40	.55	.80	1.05	1.40	2.00	2.25	3.25	
Couplings, Malleable, R. & L. . . . .	.04	.05	.08	.12	.16	.25	.36	.52								
Couplings, Galvanized, R. & L. . . . .	.06	.08	.10	.17	.25	.35	.55	.75								
Nipples, Short . . . . .	.04	.04	.05	.06	.08	.11	.13	.18	.39	.48	.75	.85	1.25	1.55	1.85	
Nipples, Long . . . . .	.06	.06	.07	.09	.13	.17	.20	.27	.59	.72	1.05	1.20	1.70	2.45	2.90	
Nipples, Short, Galvanized . . . . .	.06	.06	.06	.08	.11	.17	.21	.27	.56	.70	1.20	1.35	1.85	2.30	2.80	
Nipples, Long, Galvanized . . . . .	.11	.11	.11	.14	.19	.29	.35	.47	.86	1.10	1.70	1.87	2.60	3.15	4.25	
Bushings, Plain . . . . .		.04	.04	.05	.06	.07	.09	.14	.21	.30	.40	.50	.75	.93	1.25	
Bushings, Galvanized . . . . .		.08	.10	.12	.14	.18	.28	.42	.60	.80	1.00					
Plugs, Plain . . . . .	.02	.02	.02	.03	.04	.05	.07	.10	.18	.25	.38	.42	.65	.88	1.20	
Plugs, Galvanized . . . . .	.04	.04	.04	.06	.08	.10	.14	.20	.36	.50	.76	.84	1.30	1.75	2.40	
Reducers, Cast													1.85	2.00	2.70	
Reducers, Malleable . . . . .	.05	.06	.07	.10	.16	.20	.28	.45	.70	1.00	1.50	1.85				
Reducers, Galvanized . . . . .			.10	.15	.25	.35	.45	.75	1.05	1.65	2.40	3.05				
Caps, Cast													1.05	1.20	1.55	
Caps, Malleable . . . . .	.03	.04	.05	.08	.12	.16	.24	.32	.45	.85	1.00	1.20				
Caps, Galvanized . . . . .	.04	.05	.08	.12	.17	.24	.38	.52	.76	1.30	1.60	2.00				
Locknuts, Malleable . . . . .	.02	.03	.04	.05	.07	.09	.11	.18								
Locknuts, Galvanized . . . . .	.03	.04	.05	.07	.10	.14	.20	.30								
Locknuts, Cast . . . . .								.27	.34	.47	.64	.85	.90	1.30		
Unions, Malleable . . . . .	.18	.20	.22	.27	.33	.46	.58	.75	1.55	2.10	3.65	4.35				
Unions, Galvanized . . . . .	.27	.30	.33	.40	.50	.70	.90	1.15	2.35	3.15	5.50	6.50				
Flanged Unions . . . . .			.40	.46	.52	.64	.78	1.00	1.25	1.50	1.80	2.10	2.70	3.15	3.95	

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Steel Pump Rod and Couplings

Steel Pump Rod

Size, Inches	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$
Weight, Per Foot	6 Oz.	8 Oz.	11 Oz.	16 Oz.
Price, Polished or Galvanized	\$0.10	\$0.10	\$0.10	\$0.10

Couplings for Steel Pump Rod

MALLEABLE IRON ROD COUPLINGS

Size, Inches	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{7}{16} \times \frac{3}{8}$	$\frac{1}{2}$	$\frac{1}{2} \times \frac{3}{8}$	$\frac{1}{2} \times \frac{7}{16}$	$\frac{5}{8}$	$\frac{5}{8} \times \frac{3}{8}$	$\frac{3}{4}$
Approximate No. per Pound Threads to the Inch	9	7	7	6	6	6	4	4	3
Price, Black, Per Pound	\$0.14	\$0.12	\$0.12-14	\$0.12	\$0.12-14	\$0.12-12	\$0.11	\$0.11-14	\$0.10
Price, Galvanized, Per Pound	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.22	\$0.22	\$0.22

These couplings are tapped $\frac{1}{2}$ -inch over size unless otherwise ordered.



Hexagon Malleable Iron Rod Coupling



"Demon" Steel Rod Coupling

"Demon" Steel Rod Couplings

The "Demon" is a pressed steel rod coupling, which has very rapidly gained favor with the trade. It is put up in cartons of 25 pieces, but is priced by the hundred.

"DEMON" ROD COUPLINGS

Size, Inches	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{3}{8} \times \frac{7}{16}$
Threads to the Inch	14	12	14 x 12
Price per 100, Black or Galvanized	\$3.00	\$3.00	\$3.00



Combination Pipe and Rod Coupling

Combination Pipe and Rod Couplings

PIPE AND ROD COUPLING FOR $\frac{3}{8}$ -INCH IRON PIPE

Size Rod, Inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{1}{2}$
Approximate Number in Pound	5	5	5
Price per Pound, Galvanized	\$0.30	\$0.30	\$0.30



Male Reducer Coupling

Reducer Couplings

MADE WITH MALE AND FEMALE REDUCING END

Size, Inches	$\frac{3}{8} \times \frac{3}{8}$	$\frac{3}{8} \times \frac{1}{2}$	$\frac{1}{2} \times \frac{3}{8}$	$\frac{1}{2} \times \frac{1}{2}$
Price, Black, Per Pound	\$0.25	\$0.25	\$0.25	\$0.25
Price, Galvanized, Per Pound . . . . .	.30	.30	.30	.30



Female Reducer Coupling



Deming Wood Sucker Rods and Pin Connections



Fig. 636 Wood Sucker Rods are made of the best material obtainable, octagon in shape, and are lighter than solid steel or pipe rods. Prices include rods with couplings attached, and are for standard lengths of from 18 to 20 feet each. Shorter lengths furnished at proportionate increase in price. When wanted, rods are furnished with galvanized couplings and copper rivets at extra price. Fig. 636 Rod Couplings are of forged wrought iron with threaded box and pin joints.

Sizes and Prices of Fig. 636 Rods and Couplings

Size of Octagon Wood Rods Inches	Diameter of Box and Pin Inches	Number of Threads per Inch	Approximate Shipp'g Weight per Foot	RODS WITH COUPLINGS IN ABOUT 20-FOOT LENGTHS		COUPLINGS ONLY, PER PAIR			Adapted for Working Barrel Diameter Inches (Depending Upon the Depth of Well)	
				Cipher	Price per Foot		Cipher	Price		
					With Plain Coupl'g	With Galv'd Coupl'g		Plain		Galv'd
1 1/8	5/8	12	1 1/2	SACRO	\$0.15	\$0.20	SACRUM	\$1.30	\$1.50	From 1 3/8 to 2 3/4
1 3/8	5/8	10	3/4	SADNESS	.18	.23	SAGGER	1.75	2.40	From 2 1/4 to 3 1/4
1 5/8	7/8	10	1	SACREDLY	.20	.25	SADDLE	1.75	2.40	From 2 3/4 to 4 1/4
1 7/8	1	10	1 1/4	SAFFRON	.30	.40	SAGGING	2.75	3.75	From 3 1/4 to 4 3/4
2	1 1/8	8	1 3/4	SAGELY	.45	.60	SAGO	4.15	6.00	From 3 3/4 to 5 1/4
2 1/4	1 1/8	8	2 1/4	SABINE	.55	.70	SACKER	4.15	6.00	From 4 1/4 to 5 3/4
2 1/2	1 1/8	8	2 1/4	SAGENITE	.65	.80	SAGOIN	4.15	6.00	From 4 3/4 to 6 3/4
2 3/4	1 1/8	8	3 1/4	SACQUE	1.00	1.25	SADLY	9.50	12.00	From 5 3/4 to 7 3/4
3 1/2	1 1/2	8	4 1/2	SABOT	1.10	1.45	SACKAGE	9.50	12.00	From 7 3/4 to 9 1/2



Fig. 1637 (Cipher, "Sanity") Pin connections, or steel substitutes, are for making connection between Figs. 324 and 311 cylinder plungers and wood rod couplings. One end is threaded to fit the plunger and the other end threaded the same as pin on the coupling of Fig. 636 sucker rod, unless otherwise specified.

Sizes and Prices of Fig. 1637 Steel Pin Connection

Trade No.	Size of Pin	Threads per Inch	Size of Pin	Threads per Inch	Price	Trade No.	Size of Pin	Threads per Inch	Size of Pin	Threads per Inch	Price
1	5/8	12	5/8	12	\$0.50	7	1 1/8	8	7/8	10	2.50
2	5/8	10	5/8	12	1.00	8	1 1/8	8	1	10	2.50
3	5/8	10	7/8	10	1.00	9	1 1/8	8	1 1/8	8	2.50
4	1	10	7/8	12	2.00	10	1 1/2	8	1 1/8	8	4.00
5	1	10	7/8	10	2.00	11	1 1/2	8	1 1/2	8	4.00
6	1	10	1	10	2.00	..	...	..	...	..	.....



Deming Suction Strainers for Pipe and Hose



Fig. 338



Fig. 339



Fig. 340

Fig. 338 — Suction strainer for iron pipe. Fastens to pipe with set screw. For use where pipe is not threaded.

Fig. 339 — Female thread. Screws on to end of pipe.

Fig. 340 — Male thread. Screws into pipe coupling or into bottom of cylinder.

Size, Inches	1	1¼	1½	2	*2½	*3
Figs. 338, 339, 340 (Plain)	\$0.18	\$0.20	\$0.24	\$0.36	\$0.40	\$0.50
(Galvanized)	.22	.24	.26	.40	.....	.....
(Galvanized and Gauze Covered)	.28	.32	.36	.50	.....	.....

*Two and one-half inch and 3-inch made only in Fig. 340 plain.



Fig. 334
Strainer for Hose

Fig. 334 — Suction strainer for hose. Stem is forced into hose and held therein by hose band. *Fig. 334 is furnished regularly with capped end hose, but will be furnished for enlarged end hose when specified.*



Fig. 341
Strainer for Pipe

Fig. 341 — Extra heavy bell-shaped strainer for iron pipe. Female thread.

Size, Inches	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8
Fig. 334, Plain	\$0.20	\$0.25	\$0.35	\$0.50	\$0.75	\$1.00	.....	\$1.50	.....	.....	.....	.....	.....
Fig. 334, Galv. . . . .	.25	.30	.45	.60	1.00	1.50	.....	2.50	.....	.....	.....	.....	.....
Approx. Weight, Pounds	2	2½	3	3¾	5½	5¾	.....	.....	.....	.....	.....	.....	.....
Fig. 341, Screwed, Plain . . . . .	.22	.29	.40	.54	.80	1.05	1.70	1.90	2.25	2.40	3.40	5.00	6.60
Fig. 341, Screwed, Galvanized32	.42	.56	.75	1.10	1.60	2.60	2.90	3.50	3.80	5.00	7.25	9.75
Approx. Weight, Pounds	1½	2	3	4	6	7½	8	11	16¾	13¾	17½	27	33

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Deming Strainers, Check and Foot Valves

Vertical and Horizontal Check Valves

Where the suction lift is high or the suction pipe long it is desirable to use a foot valve as this will insure quick starting of the pump by maintaining the suction pipe full of water.



Fig. 325, Vertical



Fig. 326, Horizontal

Size, Inches	¾	1	1¼	1½	2	2½	3	3½	4
Fig. 325 { Plain	\$1.50	\$1.75	\$2.00	\$2.50	\$3.00	\$4.25	\$6.00	\$7.50	\$10.00
{ Galv.	2.00	2.25	2.75	3.50	4.50	6.00	9.00	12.00	15.00
Fig. 326 { Plain	1.00	1.25	1.50	2.00	.275	4.00	6.00	7.50	9.00
{ Galv.	1.50	1.75	2.25	3.00	4.00	5.50	8.00	10.00	12.00



Fig. 328, Foot Valve and Strainer, 6-inch and Smaller, Screwed

Foot Valves with Bolted Strainer

It is well also to have a strainer at the end of the suction pipe to prevent the intake of the larger particles of foreign matter which would tend to clog the pump valve. Fig. 328 combined foot valve and strainer, answers this purpose to very good advantage. We can furnish sizes larger than 2-inch in either the screwed or flanged type.



Fig. 328, Foot Valve and Strainer, 7-inch and Larger, Flanged

Size, Inches	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8
Fig. 328													
Will Go In Pipe, Inches	5	5	6	7	8	9	10	10	10	12	12	14	14
Screwed, Plain	\$0.48	\$0.48	\$0.62	\$0.82	\$1.20	\$1.70	\$2.50	\$2.75	\$4.00	\$4.25	\$ 7.00	\$16.00	\$16.00
Screwed, Galvanized . . . . .	.75	.75	1.00	1.45	2.00	2.70	3.90	4.25	6.00	6.50	10.00	30.00	30.00
Flanged, Plain					2.10	2.25	3.00	3.60	4.75	5.00	8.00	16.50	16.50

Foot Valves with Screwed Strainers

These foot valves are for use in open wells and also in drilled wells of diameters given in table below.



Fig. 330, Foot Valve and Strainer

Size, Inches	¾	1	1¼	1½	2	2½
Will Go In Pipe	2½	2½	3	3½	4	5
Fig. 330 { Plain	\$1.50	\$1.75	\$2.00	\$2.50	\$3.00	\$4.25
{ Galvanized	2.00	2.25	2.75	3.50	4.50	6.00

Fig. 336		1¼	1½	2	2½	3	4
Screwed for Pipe, Inches							
Outside Diameter, Inches	2¾	2¾	2¾	3¾	4½	5¾	
Will Go In Pipe, Inches	2½	3	3	4	5	6	
Approximate Weight, Pounds	3	4	4	7	11	17	
Price, Plain, Each	\$2.25	\$2.50	\$3.00	\$3.50	\$4.50	\$8.00	
Price, Galvanized, Each	3.00	3.50	4.00	4.50	5.50	10.00	



Fig. 336, Foot Valve and Strainer



Float Valves, Air Chambers, Water Conductors, Etc.
Float and Outlet Valves and Floats



Fig. 350

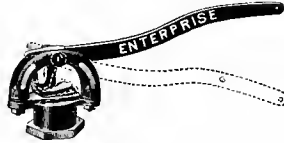


Fig. 1079



Fig. 1078

Fitted for Pipe, Inches	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3
Fig. 350 Float Valve, Each	\$0.80	\$0.80	\$1.00				
Fig. 1079 Enterprise Float and Outlet Valve	1.25	1.38	1.50	3.00	5.00	7.50	\$10.00
Fig. 1078, Copper, 9 $\frac{1}{2}$ x 2 $\frac{3}{4}$ Inches, Each							\$1.25
Fig. 1078, Copper, 12 x 3 Inches, Each							1.75
Fig. 1078, Galvanized Iron, 12 x 3 Inches, Each							1.50

HYDRAULIC AIR CHAMBERS, FIG. 369

These Air Chambers are adapted for attaching to the conducting pipe where pumps are required to work against great pressure or force water through a long lead of pipe. Their use will greatly lessen the wear on the pumps. They are fitted with tee connection.

SIZES AND PRICES

Size, Inches	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$
Price Each	\$3.00	\$3.00	\$4.00	\$4.00	\$6.50	\$12.00



Fig. 369



Fig. 389



Fig. 343

ROLLER PISTON ROD GUIDES
FIG. 389

For Pipe, Inches	1	1 $\frac{1}{2}$
Price	\$2.50	\$3.50

HANDLE BALLS
FIG. 343

Weight, Lbs.	2 $\frac{3}{4}$	4 $\frac{1}{2}$	6	8	12 $\frac{1}{2}$
Price, Each	\$0.30	\$0.45	\$0.60	\$0.80	\$1.25

WATER CONDUCTORS,
FIG. 344

The Water Conductor is a great convenience for conveying water from the spout of pumps to troughs and tanks situated at a distance. It is made to swivel and conduct the water in any direction desired. For 1 $\frac{1}{4}$ or 1 $\frac{1}{2}$ -inch Conducting Pipe, as ordered. Price, each, \$1.00



Fig. 344
Water Conductor



Fig. 368
Malleable Hose Clevis
for Pump Spout



Fig. 362
Goose Neck

MALEABLE
HOSE CLEVIS, FIG. 368
FOR PUMP SPOUT
Price, each, $\frac{3}{4}$ or 1-in. \$0.50

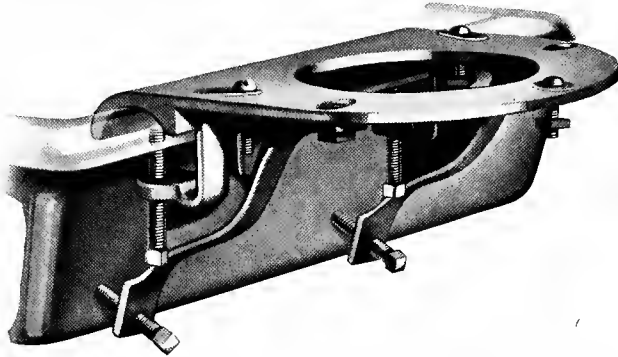
GOOSE NECK, FIG. 362

Size Inches	Fitted for Hose Coupling Inches	WITHOUT HOSE COUPLING		WITH HOSE COUPLING	
		Cipher	Price	Cipher	Price
$\frac{3}{4}$	$\frac{3}{4}$	COMPETENT	\$0.60	COMPLIMENT	\$0.90
1	1	COMPLIER	.60	COMPONENT	1.25
1 $\frac{1}{4}$	1 $\frac{1}{4}$	COMPLACENT	.80	COMPOSER	1.50
1 $\frac{1}{2}$	1 $\frac{1}{2}$	COMPLEX	.90	COMPREHEND	1.80
2	2	COMPLEXITY	1.00	COMPULSION	2.50

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Pump Bracket and Cast Iron Sinks



Pump Bracket for Flat and Roll Rim Sinks

Will attach to the rim of an ordinary painted or enameled flat or roll rim sink for supporting a pump, and can be placed on either end. The shelf is substantial and neat in design. The combination consists of the pump shelf and bracket, and has a bead around the outer and inner edges, so that all waste water will drain into the sink. It can be quickly placed in position by means of the set screws, and it can also be adjusted to the proper level. A small piece of sheet rubber packing or leather should be placed between the shelf and the sink so as to prevent marring the enamel. The suction pipe of the pump passes through opening of the shelf.

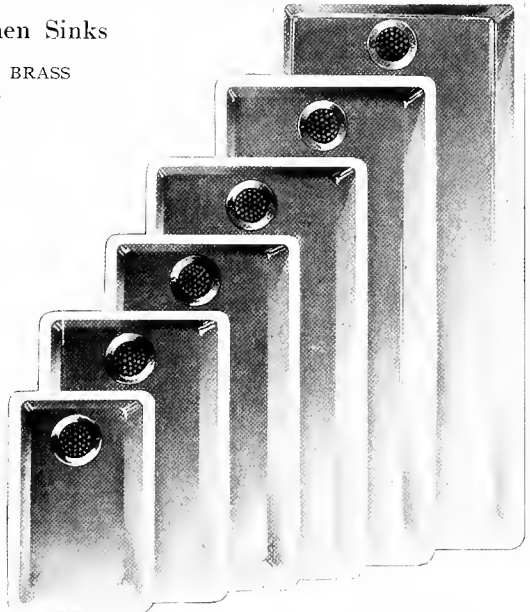
Dimensions	Weight Pounds	PRICE PER DOZEN		
		Aluminum	Galvanized	White Enameled
Length, 9 $\frac{1}{2}$ inches Top of Plate to Bottom of Bracket, 5 $\frac{1}{2}$ inches	7 $\frac{1}{2}$	\$18.00	\$24.00	\$36.00

Porcelain Enameled Iron Kitchen Sinks

WITH FLAT RIM, NICKEL PLATED BRASS STRAINER AND COUPLINGS

The sizes listed below are carried in stock for immediate shipment

16 x 24 x 6 inches	\$3.25
16 x 30 x 6 inches	3.90
18 x 24 x 6 inches	3.50
18 x 30 x 6 inches	4.25
18 x 36 x 6 inches	4.75
20 x 30 x 6 inches	4.50
20 x 36 x 6 inches	5.25





Brass Goods — Cocks and Valves



Fig. 900

GLOBE VALVE, FIG. 900

Size, Inches	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$
Price, Each	\$0.72	\$0.72	\$0.77	\$1 00	\$1.26	\$1.80	\$2.52



Fig. 908

STRAIGHT-WAY DOUBLE-GATE VALVES, FIG. 908

Size, Inches	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Price, Each	\$1.65	\$2.05	\$2.80	\$3.70	\$5.00	\$7.30	\$13.00	\$19.00



Fig. 904

HORIZONTAL CHECK VALVES, FIG. 904

Size, Inches	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Price, Each	\$0.65	\$0.65	\$0.70	\$0.90	\$1.15	\$1.60	\$2.25	\$3.15	\$4.75	\$9.00	\$13.00



Fig. 913

LEVER HANDLE, ROUGH STOP, FIG. 913

Size, Inches	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Rough Stops, Lever Handle, Per Dozen	\$21.00	\$36.00	\$52.80	\$89.40	\$149.40
Rough Stops, Lever Handle, Check and Waste, Per Dozen	21.60	36.60	54.00	91.20	152.40

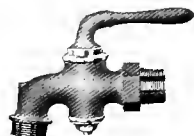


Fig. 917

LEVER HANDLE HOSE BIBBS, FIG. 917

Size, Inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
Finished Bibbs, Per Dozen	\$25.20	\$25.80	\$35.40	\$45.00	\$64.80	\$107.40	\$179.40	\$300.00
Finished Bibbs for Hose, Per Dozen	28.80	38.40	48.00	72.00	118.20	194.40	322.20	

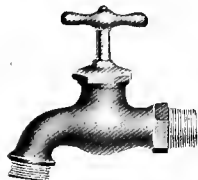


Fig. 919

COMPRESSION BIBBS, FIG. 919

Size, Inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1
Compression Bibbs, Finished, Per Dozen	\$18.60	\$19.80	\$25.20	\$33.00	\$60.00
Compression Bibbs, Finished, for Hose, Per Dozen	22.80	28.20	36.00	67.20	

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HAND AND POWER PUMPS FOR ALL USES



Pump Accessories — Metal and Glass

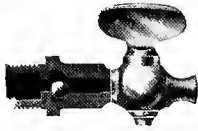


Fig. 1545

COMBINATION CHECK VALVE AND AIR COCK
Fig. 1545

For Pumping Air and Water, for Use with Hydro-Pneumatic
Water Systems

Price, \$1.00

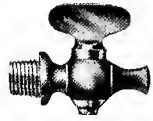


Fig. 788
Tee Handle Air Cock

Sizes for Iron Pipe, Inches.	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Fig. 788, Air Cock, Tee Handle.	\$0.40	\$0.45	\$0.50	\$0.60



Plain Brass
Oil Cup



Glass Body with
Set-Feed



Glass Body with Sight-Feed,
Set-Feed and Stop-Feed



Blued Steel Grease Cup

Sizes for Iron Pipe, Inches	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{1}{2}$
Outside Diameter of Bodies, Inches	$\frac{3}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2	2
Plain Brass, Price	\$0.35	\$0.40	\$0.60	\$0.90	\$1.25	1.75	\$1.75
Outside Diameter of Glass, Inches	$\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2	2 $\frac{1}{2}$	3	$3\frac{1}{2}$
With Set-Feed, Finished Brass, Price	\$0.80	\$1.00	\$1.25	\$1.50	\$1.90	\$3.10	\$4.00
With Set-Feed, Finished Nickel, Price . . . . .	.95	1.20	1.50	1.75	2.30	3.50	4.50
With Sight-Feed, Finished Brass, Price	3.00	3.25	3.50	3.75	4.25	7.25	9.25
With Sight-Feed, Finished Nickel, Price	3.50	3.75	4.00	4.25	4.75	8.00	10.25

PRICE LIST OF "MOON" GREASE CUPS

Number	0	1	2	3	4	5
Inside Diameter, Inches	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{1}{2}$	$1\frac{3}{4}$	$2\frac{1}{4}$	3
Outside Diameter, Inches	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2	$2\frac{3}{4}$	$3\frac{3}{8}$
Height Over All, Plunger Raised, In.	$3\frac{1}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$	$5\frac{1}{4}$	$6\frac{1}{2}$	8
Capacity, Ounces	$\frac{2}{3}$	1	$1\frac{1}{2}$	$2\frac{1}{8}$	$4\frac{1}{2}$	10
Shank Pipe Thread, Inches	$\frac{3}{8}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{3}{8}$	$1\frac{1}{2}$	$\frac{1}{2}$
Finished Cast Brass, Each	\$1.50	\$2.00	\$2.50	\$3.20	\$4.30	\$6.00
Finished Nickel, Each	1.75	2.25	2.80	3.60	5.00	6.75

PRICE LIST OF BLUED STEEL GREASE CUPS

Number	00	0	1	2	3	4
Inside Diameter, Inches	$\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Shank Pipe Thread, Inches	$\frac{1}{8}$	$\frac{1}{8}$ or $\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$ or $\frac{3}{8}$	$\frac{3}{8}$ or $\frac{1}{2}$	$\frac{1}{2}$
Capacity, Ounces	$\frac{1}{2}$	$\frac{2}{3}$	1	2	$3\frac{1}{2}$	5
Blued Steel, Each	\$0.90	\$1.15	\$1.40	\$1.80	\$2.60	\$3.50

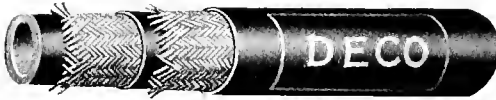


"Moon" Grease Cup

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Rubber Suction and Discharge Hose



"Deco" Special High Pressure Hose for Spraying—Good for 250 Pounds Working Pressure

"DECO" SPECIAL SPRAY HOSE FOR 250 POUNDS WORKING PRESSURE

This is a high grade continuous web hose made up especially for us and according to our specifications. It is used with hand and power sprayers and is guaranteed for 250 pounds working pressure to the square inch. We can furnish this hose in any desired lengths. Standard reel, 500 feet. List price per foot. \$0.25



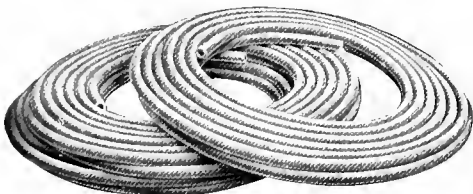
Spiral Wire Suction Hose

SPECIAL WIRE SUCTION HOSE

We carry in stock spiral wire lined suction hose as follows:

- 1-inch and 1¼-inch in 10-foot lengths.
- 2-inch in 15, 20 and 25-foot lengths.
- 2½-inch and 3-inch in 15-foot lengths.

Size, Inches	1	1¼	1½	2	2½	3
Price per Foot	\$0.75	\$0.93	\$1.13	\$1.50	\$3.10	\$4.00



Red "CI" 3/8-inch Tubing for Bucket and Knapsack Spray Pumps

RED "CI" 3/8-INCH RUBBER TUBING

For use with bucket and knapsack sprayers, etc. Furnished in lengths of 50 feet or less. List price per foot \$0.15



Three-Ply Hydrant Hose

THREE-PLY HYDRANT HOSE

This is the very best quality of hose for hydrant and pump service where the pressure does not exceed 75 pounds.

Size, Inches	¾	1	1¼	1½
3-Ply Hydrant	\$0.30	\$0.40	\$0.50	\$0.60

FOR HOSE COUPLINGS AND BANDS, SEE PAGE 312

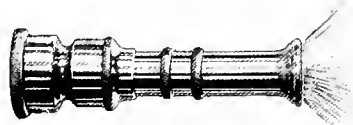


Fig. 948—Throwing Spray
Also throws solid stream

"GEM" HOSE NOZZLE, FIG. 948

Size, Inches	¾	1
"Gem" Hose Nozzles, with graduating spray. Price, Dozen	\$10.00	\$15.00

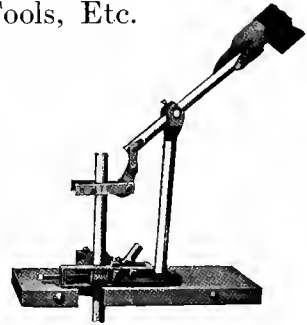


Pipe Pullers, Fitters' Tools, Etc.



JACK SCREW PIPE PULLER, FIG. 861

Holds Pipe, Inches . . .	1	1 1/4	1 1/2	2	2 1/2	3
No. 2, with 1, 1 1/4, 1 1/2 or 2-in. Dies				\$2.75		
Extra Dies for No. 2	\$0.80	\$0.75	\$0.50	.50		
No. 3, with 2, 2 1/2 or 3-in. Dies						\$5.00
Extra Dies for No. 3				.80	.75	.75



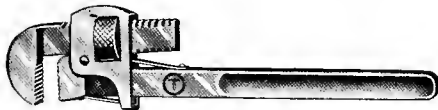
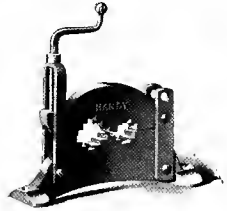
BABCOCK'S PIPE LIFTER AND HOLDER, FIG. 884

Price, complete for 1 and 1 1/4-in. Pipe, \$6.50

Holds Pipe, Inches . . .	3	3 1/2	4	4 1/2	5	6
No. 4, with 3 1/2 or 4-in. Dies			\$8.50			
Extra Dies for No. 4	\$2.25	\$2.00	\$1.75			
No. 5, with 4, 4 1/2 or 5-in. Dies					\$10.00	
Extra Dies for No. 5	3.25	3.00	2.75	\$2.50	2.00	
No. 6, with 4, 4 1/2, 5 or 6-in. Dies						\$12.00
Extra Dies for No. 6			3.00	2.75	2.50	2.25

HANDY PIPE VISE, FIG. 858

Fig. 858, Capacity from 3/8-inch Rod to 2-inch Pipe. Each . \$3.00



STILLSON WRENCH, FIG. 844

Length, Open, . . .	6 In.	8 In.	10 In.	14 In.	18 In.	24 In.
Takes Pipe, In..	1/2 to 3/4	3/4 to 1	1 to 1 1/2	1 1/2 to 2	2 to 2 1/2	
Price . . . Each	\$2.00	\$2.00	\$2.25	\$3.00	\$4.00	\$6.00
Extra Jaws, "	.75	.75	.80	1.00	1.33	2.10
Extra Nuts, "	.15	.15	.20	.20	.22	.35
Ex. Frames "	.35	.35	.40	.50	.55	.80



BARNES' CUTTER, FIG. 855

Numbers . . .	1	2	3	4	5
Cuts Pipe, In.	1/2 to 1	1/2 to 2	1 1/2 to 3	2 1/2 to 4	4 to 6
Price . . . Each	\$4.50	\$6.00	\$10.00	\$20.00	\$30.00
Ex. Wheels, "	.25	.30	.40	.50	.75
Wheel Pins, "	.10	.10	.10	.20	.20



DIE STOCKS WITH SOLID DIES, FIG. 848

Number	0	1	1 1/2	1 3/4	2	3
Dies with Each Stock	1/2 to 1/2	1/4 to 1	3/4 to 1 1/4	1 to 1 1/2	1 1/4 to 2	2 1/2 to 3
Dimensions of Dies	2 x 1/2	2 1/2 x 3/4	3 x 3/4	3 x 3/4	4 x 7/8	5 x 1 1/4
Complete with Right-hand Dies. Each	\$9.50	\$15.00	\$13.50	\$13.50	\$20.00	\$43.00
Stocks without Dies or Guides	3.50	5.00	6.00	6.00	9.50	25.00
Extra Dies, Right or Left	1.50	2.00	2.50	2.50	3.50	9.00
Extra Guides. . . . .	.25	.35	.45	.45	.60	1.00
Die Frames . . . . .		.30	.40	.40	.50	.60



Brass Jacket Drive Well Points

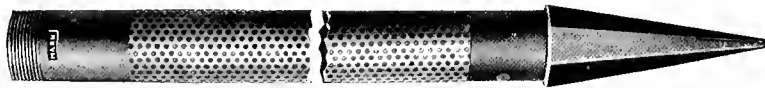


FIG. 630

Trade No.	Size Inches	Length Feet	Jacket Inches	Holes	PRICES BY THE DOZEN			
					No. 60 Gauge	No. 80 Gauge	No. 90 Gauge	No. 100 Gauge
74	1	2	18	70	\$ 33.00	46.00	52.00	62.00
76	1	2½	24	100	42.00	56.00	64.00	78.00
78	1	3	30	120	51.00	66.00	76.00	94.00
80	1	3½	36	140	60.00	76.00	88.00	120.00
82	1	4	42	160	69.00	86.00	100.00	136.00
84	1	4½	48	190	78.00	96.00	112.00	152.00
86	1¼	1½	14	80	30.00	42.00	50.00	64.00
90	1¼	2	18	100	36.00	52.00	60.00	80.00
94	1¼	2½	24	125	46.00	64.00	75.00	100.00
98	1¼	3	30	150	56.00	76.00	90.00	120.00
100	1¼	3½	36	175	66.00	88.00	105.00	140.00
102	1¼	4	42	200	76.00	100.00	120.00	160.00
106	1¼	4½	48	225	86.00	112.00	135.00	180.00
110	1¼	5	54	250	96.00	124.00	150.00	200.00
112	1¼	5½	60	275	106.00	136.00	165.00	220.00
136	1½	2	18	120	48.00	65.00	78.00	94.00
140	1½	2½	24	160	60.00	80.00	96.00	118.00
144	1½	3	30	200	72.00	95.00	114.00	142.00
146	1½	3½	36	230	84.00	110.00	132.00	166.00
148	1½	4	42	270	96.00	125.00	150.00	180.00
150	1½	4½	48	310	108.00	140.00	168.00	204.00
152	1½	5	54	350	120.00	155.00	186.00	228.00
154	1½	5½	60	390	132.00	170.00	204.00	252.00
160	2	2	18	140	75.00	94.00	110.00	130.00
164	2	2½	24	200	90.00	112.00	132.00	160.00
168	2	3	30	260	105.00	130.00	154.00	190.00
170	2	3½	36	290	120.00	148.00	176.00	220.00
172	2	4	42	330	135.00	166.00	198.00	250.00
174	2	4½	48	380	150.00	184.00	220.00	280.00
176	2	5	54	430	165.00	202.00	242.00	310.00
178	2	5½	60	480	180.00	220.00	264.00	340.00
180	2	6	66	530	195.00	238.00	286.00	370.00
184	2½	3	30	300	180.00	230.00	260.00	300.00
188	2½	4	42	360	230.00	300.00	340.00	400.00
192	2½	5	54	420	280.00	370.00	420.00	500.00
196	2½	6	66	480	330.00	440.00	500.00	600.00
200	3	3	30	300	240.00	310.00	340.00	410.00
204	3	4	42	420	300.00	390.00	430.00	520.00
208	3	5	54	540	360.00	470.00	520.00	630.00
212	3	6	66	660	420.00	550.00	610.00	740.00
216	4	4	36	360	480.00	560.00	600.00	700.00
220	4	6	60	600	630.00	760.00	840.00	1,000.00
224	4	8	84	840	780.00	960.00	1,080.00	1,300.00
228	4	10	108	1,080	930.00	1,160.00	1,320.00	1,600.00



Fig. 898

MALLEABLE IRON DRIVE CAP, FIG. 898

These caps are made for driving well points. They are extra heavy and especially designed for driving pipe. They are much stronger than the ordinary cap.

Size, Inches	1¼	1½	2
Fig. 898, Malleable Drive Cap	\$0.20	\$0.24	\$0.44



Gauges, Current Breakers, Etc.

WATER RELIEF VALVE, FIG. 1526



Fig. 1526

Size, Inches	$\frac{3}{4}$	1	$1\frac{1}{4}$
Finished, Price Each	\$11.00	\$13.00	\$16.00
Nickel Plated	12.00	14.00	18.00

To adjust to different pressures, loosen lock nut, turn hand-wheel to right to increase pressure, to left to decrease pressure, then tighten lock nut.

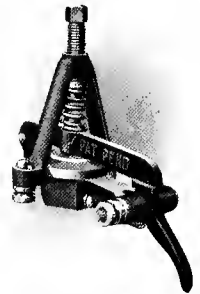


Fig. 1540 Current Breaker

CURRENT BREAKER FOR GASOLINE ENGINE, FIG. 1540

1540—Automatically cuts out battery current when pressure in tank reaches a predetermined point. Simple—Durable—Reliable. Price, for $\frac{1}{2}$ -inch pipe \$6.00

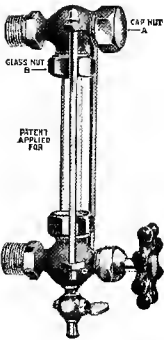


Fig. 1535 Water Gauge

WATER GAUGE, FIG. 1535—To fit $\frac{1}{2}$ -inch openings. Has $\frac{5}{8}$ -inch glass and hand-wheel. Should glass break, ball check valve closes and prevents air and water from escaping.

Price \$3.00

WATER PRESSURE GAUGE, FIG. 688—Imitation hard rubber. Price, including cock ($3\frac{1}{2}$ -inch) \$3.00

Illustration shows a gauge graduated to 30 pounds. We, however, regularly supply gauges graduated to 100 pounds pressure at this price.



Fig. 688



Fig. 390

THE HERCULES PATENTED WINDMILL CONNECTION, FIG. 390

Holds the pump rod firmly in position. The weighted wrench forces the set screw in hole of slide iron and clamps it firmly to the pump rod. Wrench cannot detach itself.

Two complete turns to the left allows the pump rod to play freely in the slide iron, and the connection is made again by turning twice to the right.

Fig.	For Pump With	Cipher	Price
390	6 to 10-inch Stroke	DEFEND	\$1.25



Double Pole Diaphragm Pressure Regulators For Small D. C. and A. C. Motors

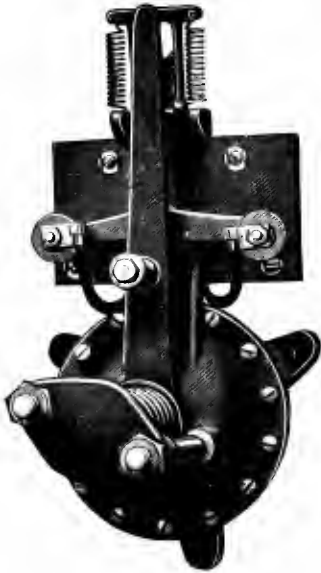


Fig. 1508
List Price, \$24.00

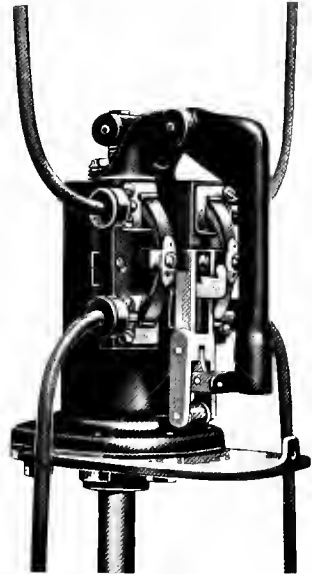


Fig. 1509
List Price, \$19.00

Fig. 1508 and Fig. 1509 Diaphragm Pressure Regulators are designed for the automatic control of electric motors which drive pumps operating in connection with pneumatic water systems. They are positive in operation and are absolutely reliable. *Fig. 1509 is fully enclosed, the enclosing case being omitted in the illustration to show working parts.*

In operation the motor is stopped by the regulator when the maximum pressure desired is reached, and the regulator operates to start the motor again when the pressure is reduced to the minimum for which it is set. For the usual installations the regulators are set for a maximum pressure of 45 pounds, with a minimum pressure of 25 pounds; although when specified they can be set for a maximum pressure of 75 pounds or less, with the minimum pressure 20 pounds lower.

Connection with the pressure tank should be by an independent pipe from the tank and not from the discharge pipe from the pump. Fig. 1508 is fastened to the wall, or other vertical support, by screws, while Fig. 1509 is supported by the $\frac{3}{8}$ -inch supply pipe and requires no other support.

They are suitable for use with motors which may be thrown directly across the line, and of capacities not exceeding the following:

ON A. C. CIRCUITS				ON D. C. CIRCUITS			
Phase	Voltage	Horse Power		Voltage	Horse Power		
		Fig. 1508	Fig. 1509		Fig. 1508	Fig. 1509	
1	110	2	2	115	1	1	
1	220	4	3	230	1	1	
1	440-550	5	3	500	1	1	
2-3	110	3	2	.....	...	...
2-3	220-550	5	3	.....	...	...

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



MISCELLANEOUS HAND AND POWER PUMPS

FOR VARIOUS USES

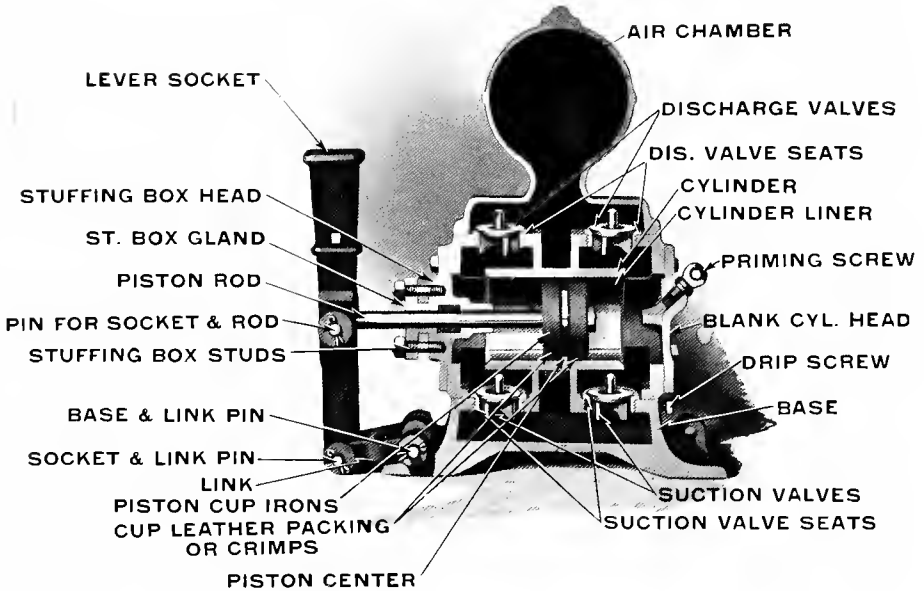
PUMPS FOR THE FARM AND
FACTORY, GARAGE, PLUMBING
SHOP, ETC., INCLUDING THRESH-
ER TANK PUMPS, CONTRACTORS'
PUMPS, BILGE PUMPS, PLUMB-
ERS PUMPS, FACTORY AND
VILLAGE FIRE PUMPS, AIR
COMPRESSORS, HYDRAULIC
RAMS, TEST PUMPS, CREAMERY
PUMPS, ETC.





Typical Deming Double-Acting Force Pump

Fig. 601 (In Section)



Detail of Triumph Pump

The pumps in this section are so varied in their construction and use that it is impossible to show a sectional view of any one pump which will be representative of all. However, on this page we have illustrated Fig. 601 as being a typical double-acting force pump. It discharges water on both strokes of the lever and will lift and force from 60 to 75 feet, depending upon conditions. All of the pumps listed in this section have the cylinder or working parts located in the body of the pump so that no independent cylinder will be required.

None of these pumps, therefore, are intended for a greater suction distance than 22 feet, and in the case of diaphragm pumps, not more than 20 feet. In most instances, when using pumps shown in this section, it will be found advisable to attach a strainer to the suction pipe or hose to keep particles of sand, gravel, etc., from being drawn into the pump.



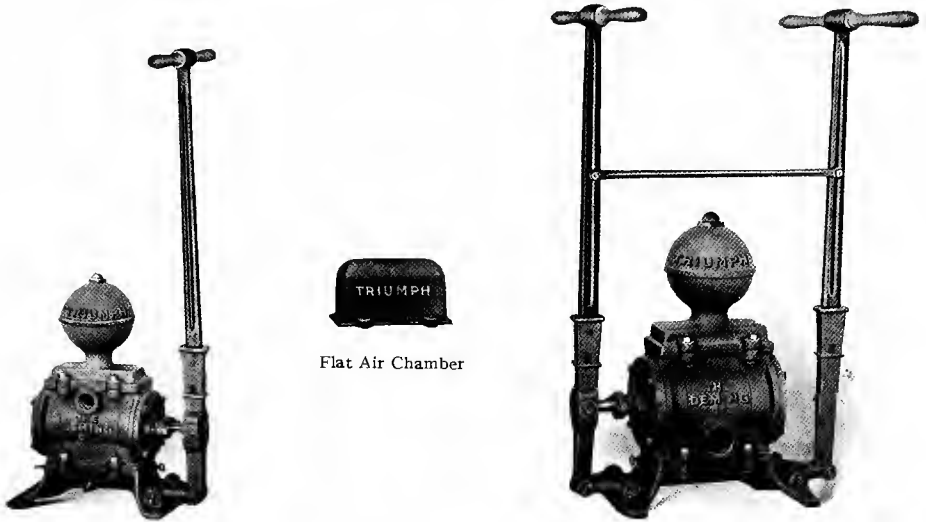
HAND AND POWER PUMPS FOR ALL USES



Deming "Triumph" Double-Acting Force Pumps

Fig. 601

Fig. 602



Flat Air Chamber

Fig 601 is a heavy duty double-acting force pump, fitted with single malleable iron lever with wood handle, and is particularly well adapted for use in mines, factories, warehouses, for fire protection, and for use on vessels, in pumping either hot, cold, acid or salt water. The piston rod is solid brass, and works through a bolted stuffing box and gland. The piston is regularly fitted with leather crimps, but for hot water is furnished with canvas crimps. Valves and seats are of brass, and the cylinder is brass lined. All brass cylinder, or entire water end of brass, furnished as ordered. Standard air chamber is round, but flat air chamber is furnished to order without extra charge. All pumps are provided with brass vent plugs to prevent freezing.

Fig. 602 is identical in construction with Fig. 601, except that it is provided with two malleable iron levers, and is made in the three larger sizes only. The No. 4, with 5-inch diameter cylinder, has a displacement somewhat in excess of 100 cubic inches, thereby more than meeting the requirements of the U. S. Steamboat Inspection Service, which calls for one pump of 100 cubic inches capacity on vessels of 200 tons or less, and two pumps on vessels of over 200 tons. These pumps are suitable for pressures up to 50 pounds.

The suction and discharge of Figs. 601 and 602 are regularly fitted for iron pipe; fitted with brass hose couplings at extra price. *Extreme suction lift should not exceed 25 feet.*

Sizes and Prices

Fig.	No.	Diam. Cyl., In.	Length Stroke, In.	Gals. per Rev.	Diam. Suc. Pipe, In.	Diam. Dis. Pipe, In.	BRASS LINED		BRASS CYLINDER		*BRASS		Extra for Brass Hose Coupling
							Cipher	Price	Cipher	Price	Cipher	Price	
601	1	2½	4½	.190	1¼	1	FACADE	\$27.00	FACING	\$55.00	FACET	\$75.00	\$2.00
601	2	3	4½	.275	1¼	1	FACETIOUS	28.00	FACTION	55.00	FACETE	75.00	2.00
601	3	4	4½	.490	1½	1¼	FACIAL	30.00	FACULTY	60.00	FACIENT	90.00	3.00
601	4	5	5½	.935	2	1½	FACILITY	40.00	FADING	90.00	FACILE	150.00	4.20
601	5	6	5½	1.224	2½	2	FACIALLY	50.00	FACIES	120.00	FACTIVE	185.00	7.50
602	3	4	4½	.490	1½	1¼	FACINGLY	35.00	FACT	65.00	FACTO	95.00	3.00
602	4	5	5½	.935	2	1½	FAGGING	45.00	FAILING	95.00	FACTUM	155.00	4.25
602	5	6	5½	1.224	2½	2	FAGOT	55.00	FAINTED	125.00	FACTUAL	190.00	7.50

*Brass pumps are made entirely of brass, except levers, links and bolts.

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Deming "Climax" Double Acting House Force Pumps

For Open Tank Water Systems
Will Lift and Force 50 to 75 Feet

Fig. 608

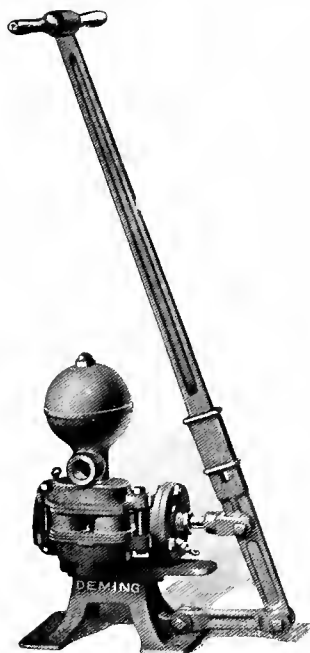
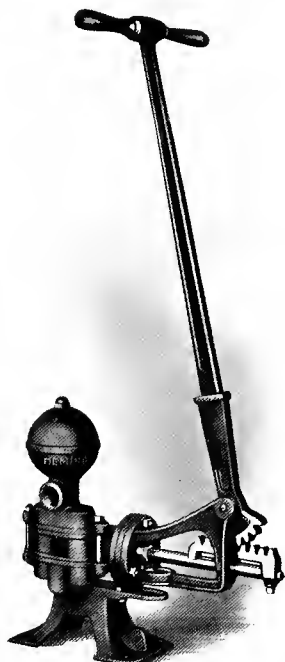


Fig. 600



These are two of our most popular pumps for elevating water to upper floors and attic tanks. Access to the valves is obtained by removing the two bolts, one on each end of the pump. The air chamber and suction attachment can then each be separated from the valve chamber, leaving the valves exposed. As shown in the illustration, the valve chamber is cast on the side of the cylinder. Both cylinder heads are bolted on, making the plunger easily accessible.

Water is discharged on both strokes and a steady even stream is insured because of the large air chamber. Figs. 608 and 600 are especially

suitable to open tank water systems. For pumps to be used with the hydro-pneumatic (compressed air tank systems) see next page. All "Climax" pumps have bronze wing valves and bronze valve seats. Many thousand "Climax" pumps are now in use.

Fig. 600 is fitted with cog lever. In this respect only does it differ from Fig. 608 which has plain lever.

Sizes and Prices

No.	Size of Cyl. Inch	Suction Inch	Dis. Inch	Stroke Inch	Weight Pounds	Fig. 608				Weight Pounds	Fig. 600			
						Iron		Brass-Lined Cyl.			Iron		Brass-Lined Cyl.	
						Cipher	Price	Cipher	Price		Cipher	Price	Cipher	Price
1	2½	1¼	1	4	55	FABLE	\$16.00	FABULIST	\$18.00	60	FRANTIC	\$18.00	FRAUD	\$20.00
2	3	1½	1¼	4	61	FABRIC	18.00	FABULIZE	21.00	67	FRAP	20.00	FRAUDFUL	23.00

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Deming "Climax" Double Acting House Force Pumps

For Hydro-Pneumatic Systems
Will Lift and Force 50 to 75 Feet

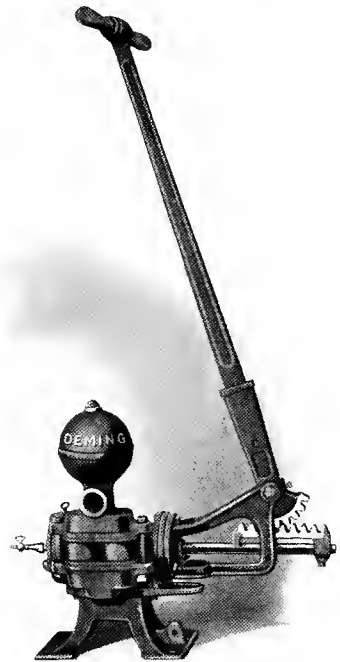
Fig. 608½

With Air Cock and Plain Lever



Fig. 600½

With Air Cock and Cog Lever



Except that to each of these pumps is fitted a small check valve and air cock, they are identical with Figs. 608 and 600 shown on the opposite page. This air valve which is attached to the cylinder head, adapts these pumps for use with hydro-pneumatic systems of water supply (commonly known as compression tank water systems).

The hydro-pneumatic systems are fully explained on pages 254 to 284. With the air cock just mentioned the amount of air to be pumped into the tank with the water, can be easily governed by adjusting the cock. If it is desired to

pump water only, then the air cock can be shut off. Fig. 600½ "Climax" is the Fig. 608½ "Climax" with cog lever instead of plain lever.

Sizes and Prices

No.	Size of Cyl. Inch	Suction Inch	Dis. Inch	Stroke Inch	Weight Pounds	Fig. 608½				Weight Pounds	Fig. 600½			
						Iron		Brass-Lined Cyl.			Iron		Brass-Lined Cyl.	
						Cipher	Price	Cipher	Price		Cipher	Price	Cipher	Price
1	2½	1¼	1	4	55	FRANK	\$17.00	FRANKING	\$19.00	60	FRAY	\$19.00	FRECKLE	\$21.00
2	3	1½	1¼	4	62	FRANKED	19.00	FRANKLY	22.00	67	FRAYING	21.00	FRECKLY	24.00

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Automobile Rotary Gasoline Pump

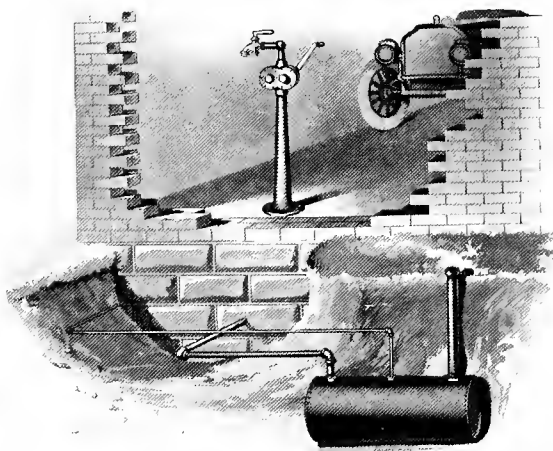
With Tall Base
Will Lift and Force 60 Feet

Fig. 776

The "Typical Installation" below shows how Fig. 776 may be installed and connected up to underground tank.

The working parts of Fig. 776 consist of a set of cams enclosed in an iron case (see description in Chapter "Rotary and Centrifugal Pumps") and mounted on a tall base. To operate, if a cock is on the spout, open the cock and turn the crank in the direction indicated by the arrows on the face of the pump. When through pumping, turn the crank in the opposite direction several revolutions, after which the cock should be closed, thus preventing the escape of gasoline and reducing fire risk to a considerable degree. For the price, no better pump is made.

In this "Typical Installation" the tank is 24 inches in diameter, 36 inches long; has one inch suction pipe; $\frac{1}{4}$ inch air vent pipe and air cock and two inch filling pipe.



Typical Installation

The tank should be buried outside the garage. This illustration is shown as a guide to those desiring to install such an outfit. Prices on storage tanks, fittings, etc., will be quoted on application.

Sizes and Prices

Suction Fitted for Pipe. Inches	Discharge Fitted for Bibb Cock Inches	Capacity at 50 Revolutions per Minute Gallons	Weight Pounds	Pump only, Iron			
				Without Cock		With Cock	
				Cipher	Price	Cipher	Price
1	$\frac{3}{4}$	$5\frac{1}{2}$	78	GARAGE	\$22.50	GARUM	\$25.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Automobile Rotary Gasoline Pump

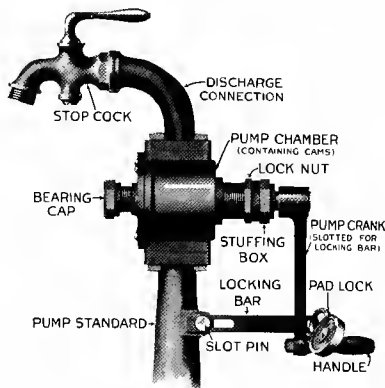
Furnished Always With Special Gasoline Cock
Will Lift and Force 60 Feet

Fig. 804

Gasoline can be hauled in absolute safety with Fig. 804 since it is constructed so as to conform to the requirements of the National Board of Underwriters and is included by them in the list of permitted devices of this character.

Fig. 804 has no valves, the working mechanism consisting of a set of cams enclosed in an iron shell. The stuffing-box gland and shaft are brass, as is the stop cock on the discharge which is furnished with hose thread so that the gasoline can be pumped direct into an auto. **This cock is always included with the pump.**

A safety locking device protects the owner against loss of gasoline. Every portion of the pump coming in contact with the



Detail View Showing
General Mechanism



Fig. 804

liquid is enclosed. The discharge spout is bolted to the cam case and the base is also bolted on. This is a good substantial pump; the best of its kind that money can buy. Although especially designed for use with automobiles, Fig. 804 can also be used for any purpose to which a rotary pump is adapted.

On the opposite page is shown a "Typical Installation." The detail view of the general mechanism shows plainly the excellence of design and construction.

Sizes and Prices

Suction Fitted for Pipe Inches	Discharge Bibb Fitted for Hose Inches	Capacity at 50 Revolutions per Minute Gallons	Weight Pounds	Pump With Cock	
				Cipher	Price
1	$\frac{3}{4}$	$5\frac{1}{2}$	83	GAROUS	\$30.00

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Gasoline Plunger Pumps

For Private Garages
Will Lift and Force 50 Feet

Figs. 725 and 726



Fig. 725

To anyone desiring a low priced gasoline pump of small and medium capacity, these two pumps will commend themselves.

Fig. 725 will handle about 1 3/4 gallons of gasoline per minute when operated at 42 strokes. It has a special foot valve fitted for 3/4 inch suction pipe. The discharge connections adapts it for 1/4 inch pipe or 3/8 inch and 1/2 inch hose.

The base is adjustable, and the pump is, with the exception of the handle, made almost entirely of brass. The brass air chamber insures a steady stream. If a chain and padlock are used on the handle, thefts of gasoline will be prevented. It is fitted for 1/2-inch bibb cock. Cock can be threaded for hose at extra price.

Fig. 726 has an all brass piston with cup packing. The stuffing-box is of the nut and gland type. The base is in two parts and is clamped to the cylinder so that pipe connections may be made without disturbing

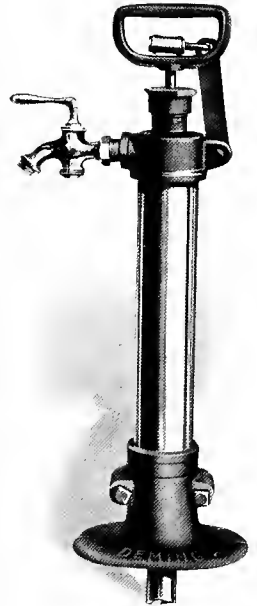


Fig. 726

the pump. When ordered with stop cock, the cock is threaded for hose.

When the handle is pushed entirely down to locking position, the brass valve trips and the liquid flows back into the tank, leaving the pump entirely free.

Fig. 726 also has a safety locking device which prevents children and others from wasting the gasoline and thereby endangering the garage. It is fitted for 1 inch suction pipe.

On another page is shown a typical installation of a gasoline pump for garage use.

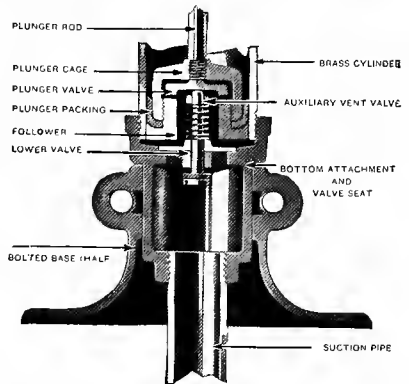


Fig. 726 Detail

Sizes and Prices

Fig.	Diameter Cylinder Inches	Stroke Inches	Capacity per Stroke Gal.	Capacity per Min. 40 Strokes Gal.	Weight Pounds	Without Cock		With Cock	
						Cipher	Price	Cipher	Price
725	1	12	.0408	1.632	10	GESTING	\$6.50	GESTIC	\$8.00
726	2	10	.136	5.44	15	GAUCHO	9.00	GARRETT	11.50

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Marine" Bilge Pumps

For Suction Lift of 20 Feet or Less

Fig. 470
Bottom Suction

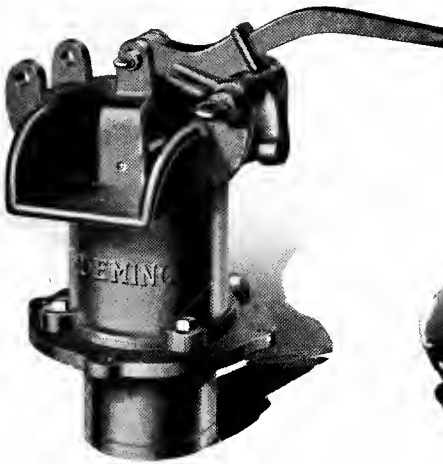
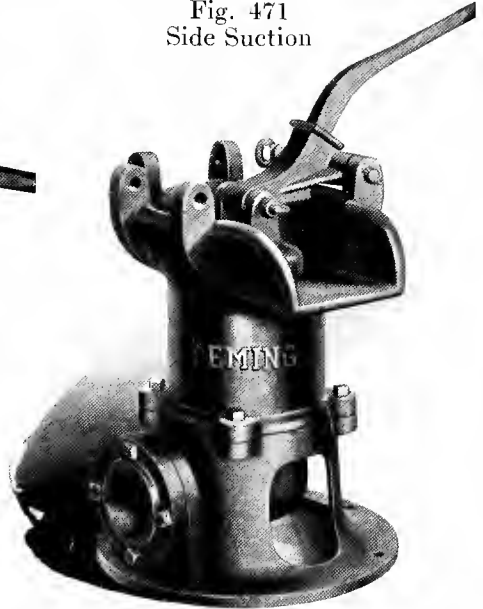


Fig. 471
Side Suction



These Pumps are adapted for raising large quantities of water by hand from the bilge well of vessels, from stone quarries and coal mines, cellars and ditches, and for irrigating purposes, where the water is not over 20 feet vertically from the pump. They are much used by contractors in removing water from excavations of various kinds.

There are three fulcrums, as shown on the engraving, whereby the pump may be operated with the lever in any one of three positions. The lever is substantially constructed of wrought iron, bent, so that its position may be reversed in the socket and thus it becomes a vertical lever which, in some instances, will be found quite convenient.

The Valves are rubber-faced, and are made large so as to give ample water way. They are easily removed for repairing. The Cylinder is brass lined. A flange, threaded for suction pipe, is bolted to the base of the pump. At a slight additional cost, we fit these pumps, when ordered, for suction hose.

The Suction may be fitted for other sizes of pipe, but is always fitted as listed, unless otherwise ordered.

Suction Hose Nipples furnished when ordered. Extra list for No. 2, \$3.75; No. 4, \$5.00.

Sizes and Prices

No.	Diam. of Cylinder Inches	Suction Fitted for Pipe Inches	Length of Stroke Inches	Capacity per Stroke Gals.	Fig. 470			Fig. 471		
					Weights Pounds	Cipher	Price	Weights Pounds	Cipher	Price
2	6	3	4	.49	125	GRACING	\$23.00	145	GRADUATING	\$26.00
4	8½	4	6	1.47	240	GRACEFULLY	30.00	280	GRACIOUSLY	35.00

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Improved Diaphragm Suction Pumps

Fig. 472, Bottom Suction

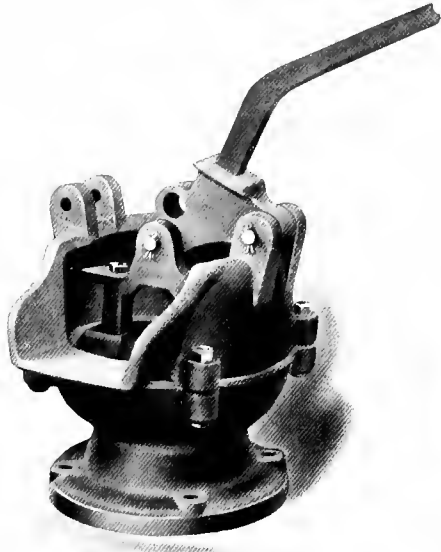


Fig. 473, Side Suction



Fig. 472 Bottom Suction Pump is made with diaphragm of the best quality of rubber, and lower valve of metal, rubber faced, both being easily removable. The waterways are large and practically non-chokable. The suction is fitted for iron pipe.

Fig. 473 Side Suction Pump is similar in construction to Fig. 472, but the suction connection is at the side, and is fitted with nipple for connecting iron pipe, which is also the thread generally used for hose coupling.

A strong wrought iron lever is furnished with each pump, the lever being bent so that it can be used in a vertical or horizontal position, and the pump operated from either side.

For the use of contractors and others these pumps are invaluable for pumping out sewers, trenches, excavations, or places containing muddy or gritty water.

Fig. 337 Galvanized Strainer furnished without hose at \$1.90 list for 2½-inch, and \$2.65 for 3-inch. Hose couplings, extra diaphragms and gaskets furnished at reasonable prices.

Figs. 472 and 473, Sizes and Prices

No.	Diam. of Diaphragm Inches	Suction fitted for Pipe Inches	Gals. per Stroke	Fig. 472			Fig. 473			Extra for 15 feet of Suction Hose with Coupling and Galvanized Strainer
				Cipher	Price Pump only	Approx. Weight	Cipher	Price Pump only	Approx. Weight	
1	9	2½	¾	GURGLE	\$36.00	70	GUZZLER	\$38.00	75	\$24.00
2	12½	3	1¼	GURNARD	42.00	150	GUSSET	45.00	165	30.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Power Diaphragm Pumping Outfit

Fig. 1473

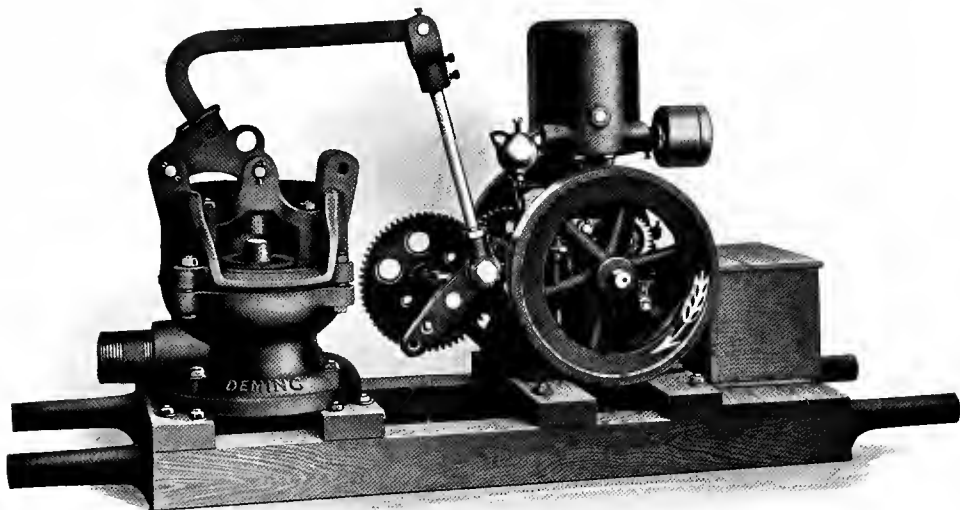


Fig. 1473 Power Diaphragm Pump is especially recommended for the use of contractors or others, when it is necessary to handle quickly and economically large quantities of muddy or gritty water. The diaphragm is 12½ inches in diameter of best quality of rubber and the valves are of metal, rubber faced, both being easily renewable. The waterways are large and practically non-chokable.

Unless otherwise specified the side suction pump illustrated is furnished, and is fitted with nipple for connecting iron pipe, which is also the thread generally used for hose coupling. When ordered for bottom suction the list price is \$3.00 less than given below.

These outfits are furnished with either 1-H.P. or 1½-H.P. engines of the four-cycle type, with hit-and-miss governor and cooling hopper, these being very reliable and simple. The gears of the jack are machine cut from solid blanks to reduce friction and noise to a minimum.

The pump and engine are mounted on substantial wooden skids, as shown, for easy handling.

Fig. 1473. Prices, Etc.

Outfit No.	Pump Dia- phragm Inches	Suction Inches	Capacity per Hour Gallons	Horse Power Engine	Cipher	*Price	Approx- imate Weight Pounds	Extra for 15 feet of Suction Hose Including Coupling and Galvanized Strainer
1	12½	3	3500	1	GUNNER	\$155.00	535	\$30.00
2	12½	3	3500	1½	GUNNERY	175.00	585	30.00

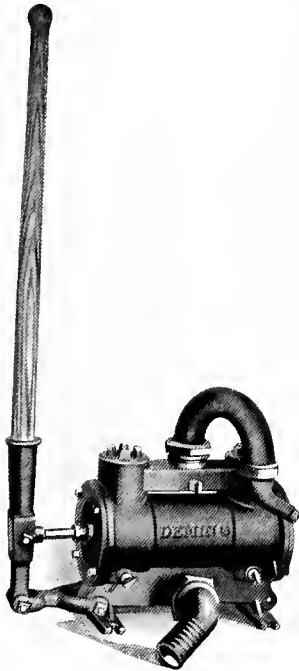
Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming "Giant" Double-Acting Thresher Tank Pump

With Reversible Lever
Will Lift and Force 60 Feet

Fig. 554



For the use of threshermen in filling their wagon tanks quickly with water for the purpose of supplying the steam engine boiler; for a contractor's ditch pump; for garden irrigating, and for mine and tank service, the "Giant" is unexcelled.

Discharge spout is fitted with hose tube for hose. For use with iron pipe, we will furnish when specified, tubes threaded for iron pipe, instead of spout and hose tubes, as illustrated. This gooseneck may be turned for discharge on either side of the pump. The capacity is from one to two barrels per minute, depending on the number of strokes. Valves are metal, faced with rubber. Cylinder is highly polished. The long wood lever insures easy operation. The polished steel piston rod operates through a brass stuffing-box gland.

The caps over the discharge valves can be removed to examine or repair the discharge valves by inserting a stick or rod between the projections. No wrench is necessary. Fig. 554 is double acting, and delivers water on each stroke.

All parts are carefully machined and assembled. If given ordinary care, Fig. 554 should last for years.

Fitted regularly with iron cylinder, but can be furnished with brass lined cylinder at \$5.00 extra, list.

Sizes and Prices

Fig. 554	Cylinder	Suction	Discharge	Stroke	Weight	Capacity	Cipher	Price
					Pounds	per Stroke		
Pump Only	5 in. Diam.	2 in. hose	1 in. hose	5 inch	90	$\frac{3}{8}$ gal.	FALCADE	\$18.00
Outfit A	Pump complete, with 15 feet of 2-inch spiral-wire suction hose and strainer; 12½ feet of 1 inch 3-ply discharge hose and nozzle.						FALDAGE	40.00
Outfit A A	Same as Outfit "A," less discharge hose and nozzle.						FALLOW	35.00
Outfit B	Pump complete, with 20 feet of 2-inch spiral-wire suction hose and strainer; 12½ feet of 1 inch discharge hose and nozzle.						FALSEHOOD	45.00
Outfit B B	Same as Outfit "B," less discharge hose and nozzle.						FAMBLE	40.00
Outfit C	Pump complete, with 25 feet of 2-inch spiral-wire suction hose and strainer; 12½ feet of 1 inch 3-ply discharge hose and nozzle.						FAMOUSLY	50.00
Outfit C C	Same as Outfit "C," less discharge hose and nozzle.						FANCYING	45.00
Outfit D	Pump complete, with 25 feet of 2-inch spiral-wire suction hose and strainer; 25 feet of 1 inch 3-ply discharge hose and nozzle.						FANGLE	54.00

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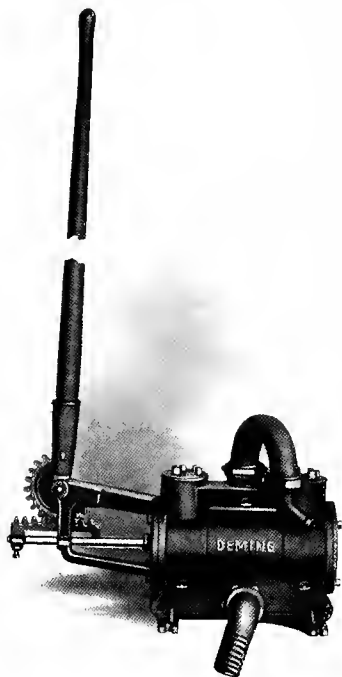


Deming "Giant" Double-Acting Thresher Tank Pump

With Cog Lever

Will Lift and Force 60 Feet

Fig. 554½



This is our Fig. 554 "Giant" tank pump shown on opposite page, but with cog lever instead of plain lever. The cog lever makes it possible to operate the pump with a minimum degree of friction. It is an excellent pump for threshermen, contractors, also for mine and tank service.

Discharge spout is fitted with hose tube for 1-inch hose. For use with iron pipe we will furnish when specified tubes threaded for iron pipe, instead of spout and hose tubes, as illustrated. This gooseneck may be turned for discharge on either side of the pump. The capacity is from one to two barrels per minute, depending on the number of strokes. Valves are metal, faced with rubber. Cylinder is highly polished. The polished steel piston rod operates through a brass stuffing-box gland.

The caps over the discharge valves can be removed by inserting a stick or rod between the projections. No wrench is necessary: Fig. 554½ is double acting, and delivers water on each stroke.

Fitted regularly with iron cylinder, but can be furnished with brass lined cylinder at \$5.00 extra, list.

Sizes and Prices

Diam. Cylinder Inches	Stroke Inches	Suction Fitted for Hose Inches	Discharge Fitted for Hose Inches	Capacity per Stroke Gal.	Weight Pounds	Cipher	Price
5	5	2	1	¾	91		
Pump Only	Includes suction strainer, suction and discharge hose tubes.					FALSARY	\$20.00
Outfit A	Pump complete with 15 feet of 2-inch spiral-wire suction hose and strainer; 12½ feet 1-inch discharge hose and nozzle.					FABIAN	42.00
Outfit A A	Same as Outfit "A" less discharge hose and nozzle.					FACER	37.00
Outfit B	Pump complete with 20 feet of 2-inch spiral-wire suction hose and strainer; 12½ feet 1-inch discharge hose and nozzle.					FADED	47.00
Outfit B B	Same as Outfit "B" less discharge hose and nozzle.					FADGE	42.00
Outfit C	Pump complete with 25 feet of 2-inch spiral-wire suction hose and strainer; 12½ feet 1-inch, 3-ply discharge hose and nozzle.					FAIL	52.00
Outfit C C	Same as Outfit "C" less discharge hose and nozzle.					FAINT	47.00
Outfit D	Pump complete with 25 feet of 2-inch spiral-wire suction hose and strainer; 25 feet 1-inch, 3-ply discharge hose and nozzle.					FAIR	56.00

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming "Ideal" Double-Acting Oscillating Force Pump

With Brackets

Will Lift and Force 20 to 90 Feet

Fig. 570

Fig. 570 is well suited for pumping hot liquid, oils, wines, cider, etc., as it has no leather packing. For such duty we recommend the all brass pump.

To secure the best results, the vertical distance from the pump to the liquid should not exceed 20 feet. A foot valve on the end of the suction pipe may be used to advantage where freezing is not liable to occur. The pump lever may be worked from either a vertical or horizontal position. The construction of Fig. 570 is such as to cause a minimum of friction. All parts are made to exact gauges so that repairs will always fit. The following parts are regularly made of brass:

Piston or moving part, valves, which are brass swing type, suction valve deck and valves, stuffing-box gland.

Following are the parts regularly made of iron, any or all of which will be made of brass when specified at extra cost:

Shell, lid, stuffing-box nut and pipe flanges.

The piston shaft is steel but will be made of brass if specified, but at extra cost. Lever is regularly malleable iron

but can be furnished with an iron socket and wood lever if so specified. The interior view shown on opposite page will explain the construction, also method of operation.

We can furnish air chamber with cock spout at additional list prices as on opposite page.

Sizes and Prices

No.	Suction and Disch. Flanges Fitted for Pipe Inches	Outside Diameter of Cylinder Inches	Inside Diameter of Cylinder Inches	Capacity at 50 Strokes per Minute Gallons	Will Lift and Force When Operated by One Man	Weight in Pounds	Iron (includes brass wing and valves, brass suction deck and valves, brass stuffing-box gland)		*Brass	
							Cipher	Price	Cipher	Price
0	1 ³ / ₂	5 ¹ / ₄	4 ¹ / ₈	4	90	17	GABLED	\$ 8. 00	GARGLED	\$16. 00
1	1 ³ / ₄	6 ¹ / ₂	5 ³ / ₈	5	72	23	GAJDED	9. 50	GARLANDED	20. 00
2	1	7 ³ / ₄	5 ⁵ / ₈	6	60	27	GAINSAID	11. 00	GARMENED	27. 50
3	1 ¹ / ₄	9	6 ³ / ₈	9	40	39	GALLANTLY	13. 00	GARNISHED	35. 00
4	1 ¹ / ₄	10 ¹ / ₄	7 ¹ / ₄	13	27	50	GALLED	16. 00	GASING	42. 50
5	1 ¹ / ₂	11 ¹ / ₂	8 ³ / ₈	19	20	58	GALLERIES	20. 00	GASSY	50. 00
6	1 ¹ / ₂	12 ¹ / ₂	9 ³ / ₈	22	17	67	GALLOPED	23. 50	GATHERING	60. 00
7	2	13 ¹ / ₂	10 ⁵ / ₈	26	14	90	GAMBOLED	27. 50	GAUGING	70. 00
8	2 ¹ / ₂	14 ¹ / ₂	11 ³ / ₄	36	10	108	GAMING	40. 00	GAZED	90. 00

*All Brass except Lever and Suction and Discharge Flanges.

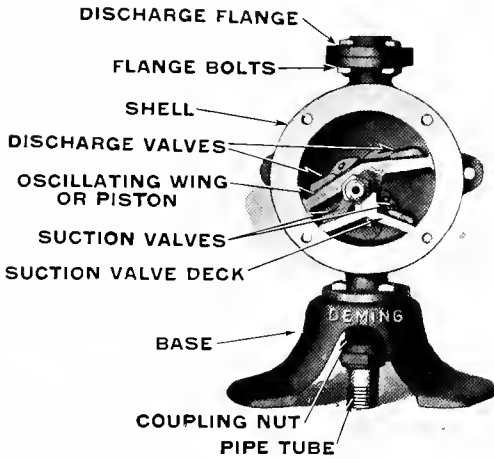


HAND AND POWER PUMPS FOR ALL USES



Deming "Ideal" Double-Acting Oscillating Force Pump Mounted on Base Will Lift and Force 20 to 90 Feet

Fig. 670



DETAIL OF FIGURE 670

Fig. 670 is same as Fig. 570 shown on opposite page, but mounted on a cast-iron base

We can furnish air chamber with cock spout at additional list as given below:

Iron Air Chamber and Cock Spout

No. 0	\$3.00	No. 3	\$4.00	No. 6	\$5.00
No. 1	3.00	No. 4	4.00	No. 7	6.00
No. 2	3.00	No. 5	5.00	No. 8	6.00

Sizes and Prices

No.	Suction and Disch. Flanges Fitted for Pipe Inches	Outside Diameter of Cylinder Inches	Inside Diameter of Cylinder Inches	Approximate Capacity per Minute Gallons	Will Lift and Force, Feet	Weight in Pounds	Iron (includes brass wing and valves; brass suction deck and valves; brass stuffing-box gland)		*Brass	
							Cipher	Price	Cipher	Price
0	1 1/4	5 1/4	4 1/4	4	90	25	GADFLY	\$ 9.00	GELDING	\$17.00
1	1 3/4	6 1/2	4 3/4	5	72	30	GAGGING	10.50	GEMINATE	21.00
2	1	7 3/4	5 1/4	6	60	35	GALLOT	12.00	GERANIUM	28.50
3	1 1/4	9	5 3/8	9	40	51	GAMUT	14.00	GHOSTLY	36.00
4	1 3/4	10 1/4	7 1/4	13	27	60	GARBAGE	17.00	GLADSTONE	44.00
5	1 1/2	11 1/2	8 3/8	19	20	70	GARDENER	23.00	GLIDING	52.50
6	1 1/2	12 1/2	9 3/8	22	17	76	GAUFFER	25.00	GOVERNESS	62.50
7	2	13 1/2	10 3/8	26	14	100	GAZELLE	30.00	GRAMMER	72.50
8	2 1/2	14 1/2	11 3/4	36	10	150	GEHENNA	42.50	GRANITE	92.50

*All brass except base, lever and discharge flange.

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Double-Acting Force Pump on Plank

With Tight and Loose Pulleys
Will Lift and Force 50 to 75 Feet

Fig. 543

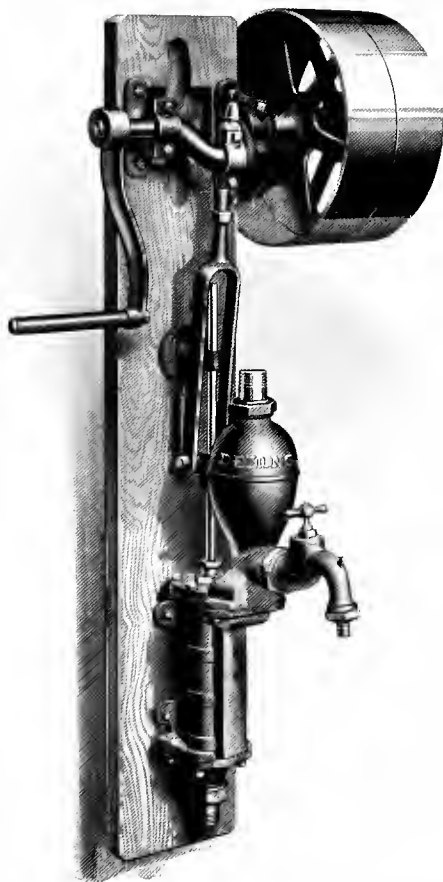


Fig. 543 is a vertical double-acting power pump for light duty. It is firmly attached to a plank sub-base by means of brackets. It is furnished with malleable galvanized threaded pipe tubes, suitable for soldering to lead pipe. Special un-threaded galvanized tubes for soldering purposes only will be furnished instead, at same price, if desired. Brass tubes, threaded for iron pipe furnished instead of malleable, at extra price when so specified. The plunger rod is brass cased and operates through a brass stuffing-box gland.

This will be found to be a most useful pump for moving large quantities of liquid to low elevations, being therefore, well adapted to tank service.

Size of pulleys, 4 x 16 inches. If cock is not desired, deduct \$2.50 from list price.

The suction and discharge are regularly fitted for iron pipe, as listed below.

Sizes and Prices

No.	Size Cylinder Inches	Suction and Discharge Fitted for Pipe Inches	Stroke Inches	Weight in Pounds	IRON		BRASS-LINED CYLINDER	
					Cipher	Price	Cipher	Price
1	2 $\frac{1}{4}$	1 $\frac{1}{4}$	7	200	EVENT	\$40.00	EAGRE	\$42.00
2	2 $\frac{1}{2}$	1 $\frac{1}{4}$	7	200	EVENTFUL	45.00	EAME	47.50
4	3	1 $\frac{1}{2}$	7	225	EVENTUAL	50.00	EARLY	53.00
6	3 $\frac{1}{2}$	1 $\frac{1}{2}$	7	235	EVERGLADE	60.00	EARN	64.00
8	4	2	7	245	EVERGREEN	70.00	EARSH	75.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Columbia" Double-Acting Force Pump

With Pitman for Power
Will Lift and Force 75 to 100 Feet

Fig. 491

This pump is especially adapted for service in railroad tank stations, distilleries, warehouses, mills and factories and is also widely used in a number of countries for irrigating purposes.

It is constructed with a view to great durability, the piston and piston rod, valves and valve seats being made of bronze. The valves are rubber discs. They are grouped in the valve chamber shown on the front of the pump and may be easily reached by removing the face plate of the valve chamber.

Being furnished with a pitman, the pump can be operated by a steam, gas, gasoline or oil engine, windmill, or any other power in connection with countershaft, working head, walking beam, etc. The pitman is fitted with a stub end for welding to the connecting rod.

Add \$5.00 to list if forked rod connection on pitman is desired.



Sizes and Prices

Diameter of Cylinder Inches	Length of Stroke Inches	Suction and Disch. Fitted for Pipe Inches	Capacity per Revolution Gallon	Weight in Pounds	IRON		BRASS-LINED CYLINDER	
					Cipher	Price	Cipher	Price
3	10	1½	.49	255	FILING	65.00	FILLY	\$ 75.00
4	10	2	.87	325	FILIAL	85.00	FILMY	97.00
5	10	2½	1.36	455	FILIALLY	110.00	FILMINES	124.00
6	10	3	1.96	690	FILIBUSTER	150.00	FILTHY	165.00
3	14	1½	.74	260	FILIGREE	90.00	FILTRATION	102.00
4	14	2	1.31	335	FILLER	115.00	FINAL	119.00
5	14	2½	2.04	540	FILLETED	135.00	FINALLY	154.00
6	14	3	2.94	700	FILLETING	175.00	FINANCE	190.00



Deming Improved Hand and Power Piston Pump

With Crank Shaft, Pulley and Handle
Will Lift and Force 75 Feet

Fig. 585



This Pump is constructed with cylinder in the stock, the plunger being operated by a steel crank shaft and pitman, which are inclosed below the air chamber. Fig. 585 is well adapted for use in cheese factories and creameries. It is suitable for raising water from shallow wells, springs and cisterns, by hand or power, and will force it to any point desired; or for filling boiler supply tanks, etc.

The cylinder is in a separate casting, and can be renewed when worn.

Fig. 585 will be fitted with stub rod to connect with independent cylinders, for deep wells when specified, at same list price. Cylinders are extra.

Sizes and Prices

No.	Size Cylinder Inches	Suction Fitted for Pipe Inches	Discharge Fitted for Pipe Inches	Stroke Inches	Pulleys	Weight Pounds	Cipher	Price
4	3	1½	1¼	5	16 x 4	122	HADDOCK	\$27.00
6	3½	1½	1¼	5	16 x 4	125	HAGGARD	30.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Improved Hand and Power Piston Pump
 With Air Chamber, Crank Shaft, Tight and Loose Pulleys
 Will Lift and Force 75 Feet

Fig. 590

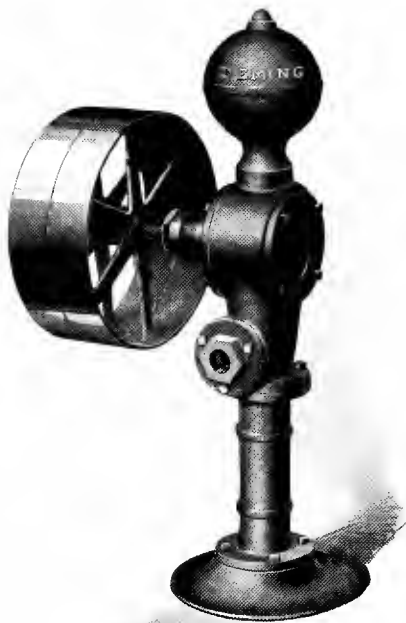


Fig. 590 is adapted for power only. When especially ordered, we fit this pump with an independent crank for using by hand.

It is adapted for shallow wells, or other places where the water supply is not over 22 feet below the pump. It can be used in deep wells by attaching one of our independent cylinders. Fig. 590 will be fitted with stub rod, for deep wells, at same list prices, when so ordered. Cylinder furnished at extra price. Fig. 590 can be used to advantage in cheese factories and creameries.

Sizes and Prices

No.	Size Cylinder Inches	Suction Fitted for Pipe Inches	Discharge Fitted for Pipe Inches	Stroke Inches	Pulleys	Weight Pounds	Cipher	Price
4	3	1½	1¼	5	16 x 3	140	HAGGISH	\$32.00
6	3½	1½	1¼	5	16 x 3	145	HAGGLING	35.00

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Improved Power Piston Pump

With Tight and Loose Pulleys
Will Lift and Force 75 Feet

Fig. 591

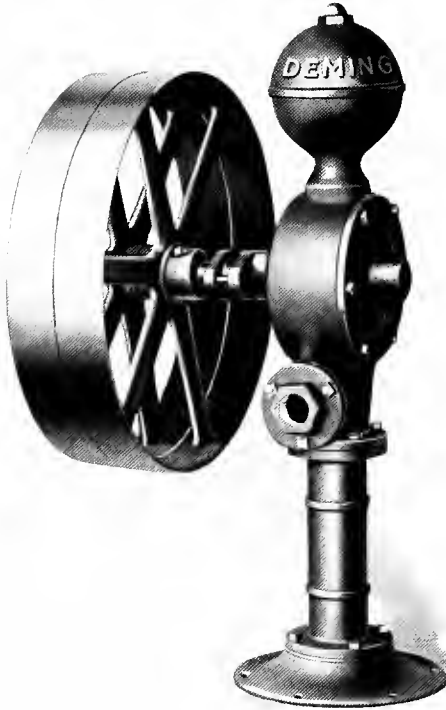


Fig. 591 is similar in design to our Fig. 590, but is constructed for more severe duty. The crank-shaft extends entirely through the body of the pump, with bearings on both sides, adding greatly to the durability. It is very generally used in creameries, cheese factories, cotton gins, shops and factories, for pumping water from wells for the boiler supply tank. For deep wells we supply it with an independent cylinder of suitable size for the additional cost of the cylinder.

Sizes and Prices

No.	Size Cylinder Inches	Suction Fitted for Pipe Inches	Discharge Fitted for Pipe Inches	Stroke Inches	Pulleys Inches	Weight Pounds	Cipher	Price
4	3	1½	1¼	5	16 x 3	150	HABENDUM	\$37.00
6	3½	1½	1¼	5	16 x 3	155	HABITANT	40.00
4	3	1½	1¼	5	24 x 3	160	HACKSTER	44.00
6	3½	1½	1¼	5	24 x 3	165	HAIRBELL	47.00

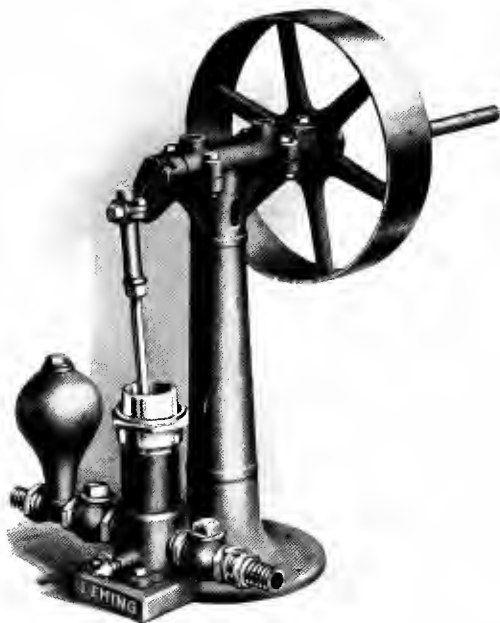
Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Special Power Plunger Pump

With Adjustable Stroke
Will Lift and Force 75 Feet

Fig. 552



This Pump, when made with brass cylinder, brass plunger and air chamber, is especially adapted for pumping wine and cider, oils, acids, hot liquids, etc. It is also made with brass plunger, iron cylinder and air chamber, for ordinary service. It may be operated by hand or power, and has adjustable crank connection for changing the length of stroke. It has brass check valves for both outlet and inlet. Fig. 552 is good for 30 pounds pressure. It is sometimes used in connection with gasoline engines for handling cooling water.

Fitted for iron pipe or hose; but as listed this pump, with iron cylinder, is fitted for pipe, and with brass cylinder has hose fittings, unless otherwise ordered.

Sizes and Prices

Size Cylinder Inches	Stroke Inches	Dimensions of Pulleys Inches	Suction and Discharge Inches	Weight Pounds	BRASS PLUNGER, IRON CYL. AND A. C.		BRASS CYL. AND A. C.	
					Cipher	Price	Cipher	Price
3	2 to 6	16 x 4	1¼	135	GRADUS	\$45.00	GRADUATED	\$70.00

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Improved Brass Air Pressure Pump, Fig. 565

With Discharge for Rubber Tubing
For 30 Pounds Pressure

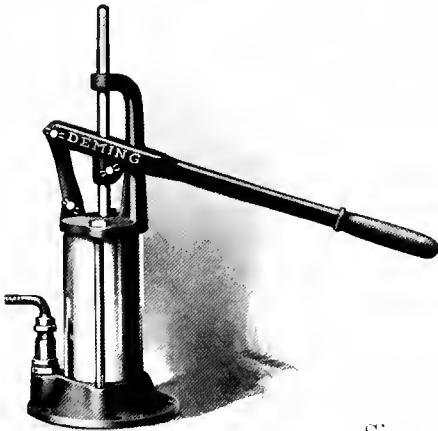


Fig. 565 is a very compact and useful air pump. The principal working parts (cylinder and valves) are made of brass; the piston-rod of polished steel.

It can be used for compressing air in a tank or barrel to force any liquid through pipes, or to force out obstructions from waste water pipes. It will occupy about 6 inches square on the counter or shelf where it may be located. The height is only about 12 inches.

Sizes and Price

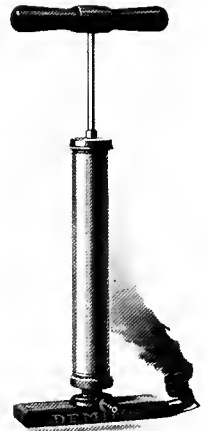
Figure	Size Cylinder Inches	Stroke Inches	Height Inches	Weight Pounds	Cipher	Price
565	3	3 $\frac{1}{2}$	12	10	HUMBLE	\$10.00

Deming Proving Pump for Gas Fitters Good for 80 Pounds Pressure

Fig. 564

Fig. 564 is used by plumbers to make leakage tests in gas pipe. It is made of brass with metallic valves and is constructed in the best possible manner. The discharge is fitted with hose tube for $\frac{3}{8}$ -inch rubber tubing.

Mercury gage, ether cup and cock with three feet of $\frac{3}{8}$ -inch hose, \$12.00. Spring gage, ether cup and cock with three feet hose, \$17.00. 3 feet of $\frac{3}{8}$ -inch hose with couplings for pump and $\frac{1}{4}$ -inch pipe, \$2.00.



Sizes and Price

Figure	Diam. of Cylinder Inches	Stroke Inches	Maximum Pressure Pounds	Height Inches	Weight Pounds	Cipher	Price
564	2	10	80	19	16	HUMILITY	\$10.00



Deming Brass Force Pumps for Plumbers

For Various Uses

Deming Handy Drip Pump, Fig. 561

This is a very strong, well made pump for extracting water from gas drip pipes. Cylinder is brass, with brass cased plunger rod. The plunger, valve and glands are also of brass. The suction is regularly fitted for 1-inch pipe.

Fig. 561



Deming Improved Plumber's Force Pump

Fig. 728

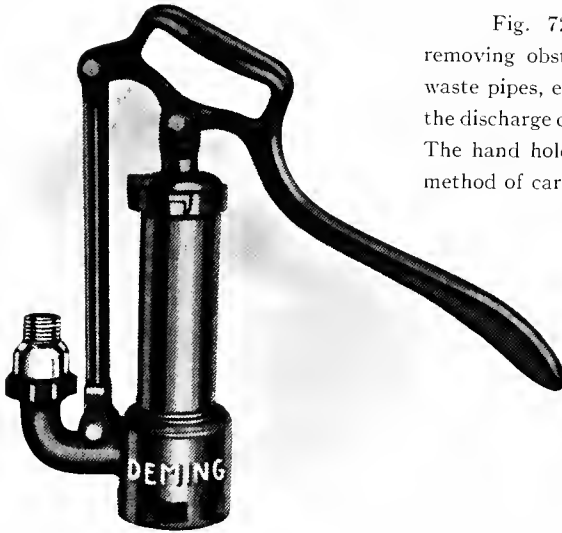


Fig. 728 is a very useful apparatus for removing obstructions from basin and sink traps, waste pipes, etc. The working parts are brass and the discharge connection is for 3/4-inch hose coupling. The hand hold on the lever provides a convenient method of carrying the pump. To clean out waste or water pipes, the pump should be placed in a vessel of water, and then connected with hose to the pipe to be cleared. A few strokes of the lever is generally sufficient to force out the obstruction. The lever is long enough to insure a high pressure.

Sizes and Prices

Figure	Diam. of Cylinder Inches	Stroke Inches	Fitted for Pipe Inches	Height Inches	Weight Pounds	Cipher	Price
561	2	14	Suction 1 pipe	29 1/2	16	HAUGHY	\$12.00
728	2	4	Discharge 3/4 hose	14 1/2	9	HATRED	7.50

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Deming "Little Giant" Hydraulic Pressure Test Pump

With Detachable Lever
For 800 Pounds Pressure

Fig. 566



This pump is built for pressures up to 800 pounds per square inch. All parts coming in contact with the liquid are made of brass. The lever is removable to permit pump to be packed in small space. It is much used for testing boilers, pipe lines, castings or for steam gauges, in connection with a master gauge.

Fig. 566 is regularly fitted for iron pipe but can be fitted with hose nipples at extra price when so ordered.

Size and Price

Size of Piston Inch	Length of Stroke Inches	Length of Lever Inches	Suction Pipe Inch	Discharge Pipe Inch	Weight in Pounds	WITHOUT GAUGE		WITH 1,000-POUND PRESSURE GAUGE	
						Cipher	Price	Cipher	Price
3/8	3	24	3/4	1/2	26	HORSEMAN	\$25.00	HULLING	\$35.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Hydraulic Force Pump for Plumbers

With Brass Valves
For 400 Pounds Pressure

Fig. 594



This pump is very convenient for plumbers to use for removing obstructions from drain pipes, etc. It is also well adapted for use as a reserve hand boiler feed pump on traction outfits. Should the injector refuse to work, then Fig. 594 would be available to pump water into the boiler and prevent an explosion. In certain localities the laws require an auxiliary feed pump, and Fig. 594 meets the requirements of these laws.

It has an extra long and powerful lever which may be turned so as to operate from either side. The suction and discharge valves are screwed to the cylinder.

Fig. 594 is very convenient for making a cold water test on boilers as a maximum pressure of 400 pounds can be obtained by its use.

Price List

Cylinder Inches	Stroke Inches	Lever Inches	Suction Inches	Discharge Inches	Height Inches	Weight Pounds	Cipher	Price
1½	3	24	¾	¾	11½	17	HEDDLE	\$10.00

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Feed Pump for Steam Boilers
 With Stub End for Power
 For Use Where Pressure Does Not Exceed 75 Pounds

Fig. 588



Fig. 588 is metallic fitted for pumping hot or cold water. It is our standard plunger pattern boiler feed pump, and is commonly attached to power by extending piston rod to counter crank shaft or a face plate on the end of main shafting. The plunger and check valves are brass, the check valves being screwed into the cylinder. This is a very durable and efficient pump.

Sizes and Prices

No.	Size Piston Inches	Suction Fitted for Pipe Inches	Discharge Fitted for Pipe Inches	Stroke Inches	Weight Pounds	WITH BRASS CHECK VALVES	
						Cipher	Price
2	1 1/4	3/4	3/4	6	25	HAMPER	\$11.25
3	1 1/2	1	1	6	30	HANDFUL	18.30
4	1 1/2	3/4	3/4	3	25	HANDICAP	16.25
5	2	1	1	3	31	HANDILY	20.31
6	2 1/2	1	1	3	38	HANDSOME	24.38
7	3	1 1/4	1 1/4	3	47	HANDY	30.47
8	2	1 1/4	1 1/4	6	40	HANGED	25.40
9	2 1/2	1 1/4	1 1/4	6	45	HANKER	33.45
10	3	1 1/2	1 1/2	6	58	HAPPEN	45.58

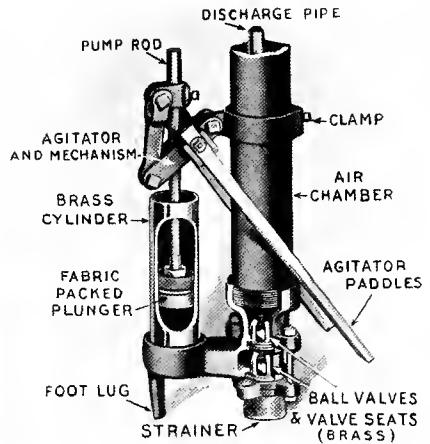
Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Century" Complete Whitewashing Outfit

With Brass Working Parts

Fig. 644



The better the light, the more work an employee will do, and "brightening up" with whitewash has therefore been found to bring very satisfactory results in factories where the light is not good. Artificial lighting bills have been very materially decreased; in some cases as much as 25 per cent., by the application of whitewash or cold water paint.

When applied with a brush, the process is slow, laborious and often unsatisfactory. Using a Deming whitewashing outfit, the operation is simplified and is quickly completed. The "Century" is very much used in factories, mills, warehouses, abattoirs, stock farms, etc.

The detail of the working parts (shown above) gives a very clear idea of the construction of the pump.

A mechanical agitator keeps the mixture in suspension. Valves are brass balls. They will not clog nor corrode. Pump can be worked at 100 pounds pressure.

Brass cylinder is $2\frac{1}{4}$ inches in diameter, and is always submerged. The long leverage and large air chamber capacity make the "Century" very easy to operate.

The tank is a 50-gallon barrel, and the wheels are broad and strong. The caster at front end facilitates turning. Twenty-five feet of $\frac{3}{8}$ -inch hose, 4-foot extension pipe, and our "Bordeaux" nozzle (the best whitewashing nozzle) are furnished.

*OUTFIT "A" — same as above, but with two 25-ft. sections of $\frac{3}{8}$ -inch hose, each with 4-ft. pipe and "Bordeaux" nozzle.

Price List

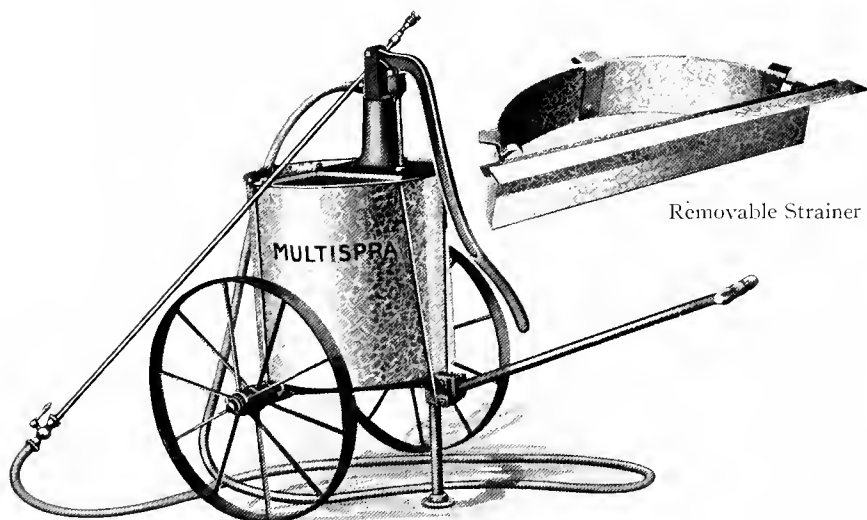
Diameter Cylinder Inches	Stroke Inches	Weight in Pounds	Cipher	Price	*OUTFIT "A"	
					Cipher	Price
2 $\frac{1}{4}$	4 $\frac{1}{2}$	200	KAISER	\$35.00	KANAKA	\$41.50

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Deming "Superior" Whitewashing Outfit
With Strainer and 22-Gallon Tank

Fig. 824



This substantial machine will stand the rack and wear which is to be expected from unskilled labor. Inside the tank is a strainer through which the mixture is poured. The liquid can not splash out through the strainer. This strainer can be easily removed, as can also the pump, without disconnecting any other parts of the outfit.

The base of the pump is held rigidly in place by means of an iron reinforcement. The pump cylinder is brass with brass ball valves, fabric packing, ample air chamber and mechanical agitator.

Galvanized iron tank holds 22 gallons and is mounted on a special axle of wrought iron pipe, by a system of long through bolts. The handle and foot are also made of pipe.

A gauze strainer at the bottom of the pump keeps the liquid free from deposits of sediment on the valve seats. Metal wheels are 24 inches in diameter with 2-inch tires. Total height 30 inches; width 33 inches.

Equipment is as illustrated, including tank and strainer, pump, wheels, 12½ feet of ½-inch "Deco" hose, 4-ft. extension pipe and "Eureka" nozzle.

Price List

Diameter Cylinder Inches	Stroke Inches	Capacity of Tank Gallons	Weight in Pounds	Cipher	Price
2	4½	22	150	KITHARA	\$35.00

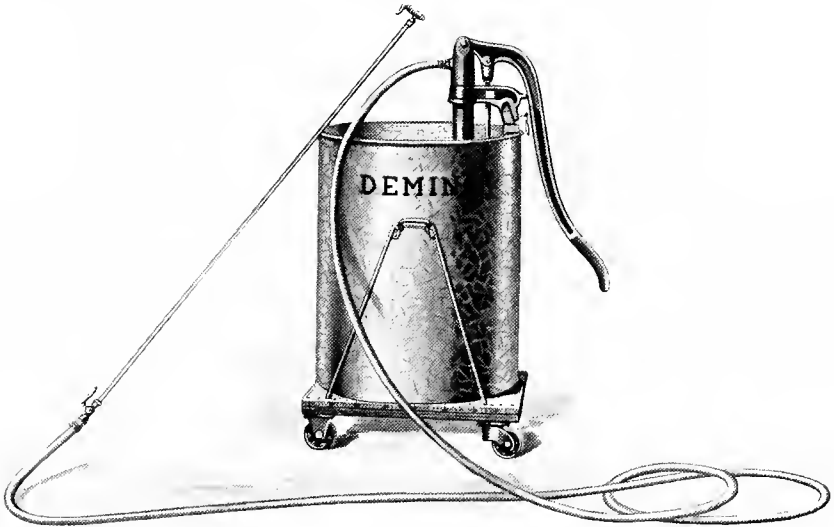
Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Major" Whitewashing Outfit

With 36-Gallon Tank

Fig. 932



Two unskilled men with one of these machines can cover 15,000 square feet per day which is six to eight times the space that could be covered by two men using brushes.

The machine forces the paint into every crevice, crack and corner of the surface, leaving in the wake of the machine, a light smooth surface, free from brush marks and impossible to obtain in any other way.

When compelled to labor in poorly lighted quarters, the best of workman has his efficiency greatly impaired. Plenty of light is absolutely essential to the successful execution of the teaching of scientific management.

The "Major" Spray Pump has 2-inch brass cylinder, brass ball valves, fabric packing, ample air chamber and twin paddle agitator. The pump is attached to tank as on a barrel, a projection on top of tank compensating for shape of barrel chime, and a rigid anchor at bottom preventing any lateral motion of the pump.

A gauze strainer keeps liquid free from lumps which would clog the nozzle. The discharge is provided with 12½-ft. section of ½-inch "Deco" hose, one "Bordeaux" nozzle and a 4-ft. extension pipe with stop cock.

The capacity of the galvanized tank is 36 gallons. It sets on a floor platform anchored down by rods. Two rigid wheels on one end and two casters on the other, support the platform and make it convenient to move about.

Price List

Diameter Cylinder Inches	Stroke Inches	Capacity of Tank Gallons	Weight in Pounds	Cipher	Price
2	4½	36	150	KLINKET	\$25.00



Deming "Success" Fire Extinguisher For Factory Fire Protection

Fig. 668



Ready for emergency

Any druggist will furnish a recipe for a brine solution that will not freeze.

With Fig. 668 we furnish a false metal barrel head with sheet copper holders which clamp over the chime of the barrel. The metal head has a circular opening in the center, the size of the valve in the bottom of the pump tank. In case of fire, the pump tank is pushed down with sufficient force to bend the metal holders of the false head so that the outfit follows it into the water, while the intake valve opens and the tank fills with water. When the tank is lifted out, the intake valve closes and false head sinks to the bottom of the barrel. The "Success" Fire Extinguisher is fully covered by patents.

The Galvanized iron tank holds nearly five gallons. The pump is brass and is fitted with four feet of $\frac{3}{8}$ -inch hose, and a pipe extension one foot long, and our special fire nozzle which will throw a solid stream 50 feet. The pump complete includes galvanized tank with intake valve; removable brass pump with malleable handle, false metal barrel head with holders, centering guides and opening, also hose, extension pipe and nozzle.

A great fire chief once remarked, "A minute of work at the beginning of a fire is worth sixty minutes after it gains a foothold." Because this is an absolute fact, our own factory is equipped with the "Success" extinguisher to supplement the chemical extinguishers.

Occasionally a chemical extinguisher may not work in the time of greatest need, but the "Success" is always ready and will not fail.



Showing the "Success" tank more than half full. The false metal head can be seen on its way to the bottom of the barrel. It takes about 5 seconds to fill the tank.

Price List

Diam. of Cylinder Inches	Stroke Inches	Capacity per Stroke Gallons	Cap. per Min. at 50 Strokes Gallons	Weight in Pounds	Height Inches	Cipher	Price
1	12	.0408	2.04	11½	28½	KERNEL	\$10 00

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Deming Improved Two-Cylinder Force Pump

With Wood Levers

Will Lift and Force 50 to 100 Feet

Fig. 615

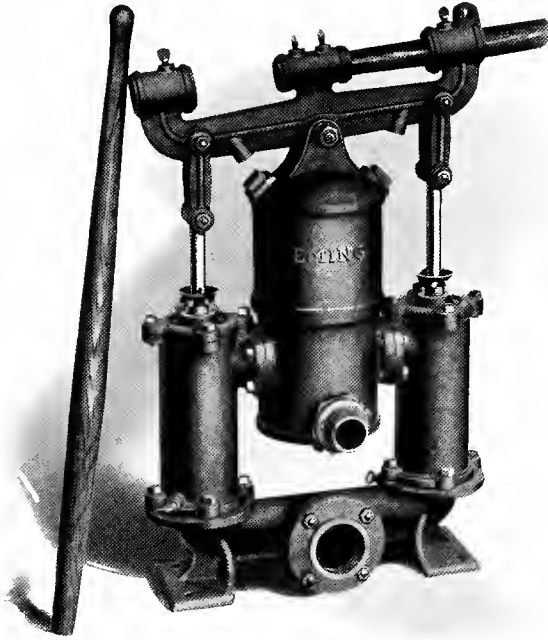


Fig. 615 has been long used as an efficient fire pump for use about factories, warehouses, railroad stations and other places where fire protection is required. It is also in great favor as a deck pump on lake and river vessels.

It is fitted with brass piston rods, brass plunger, valves and brass stuffing-box glands To prevent freezing, remove the drip screws in the base of the pump.

Sizes and Prices

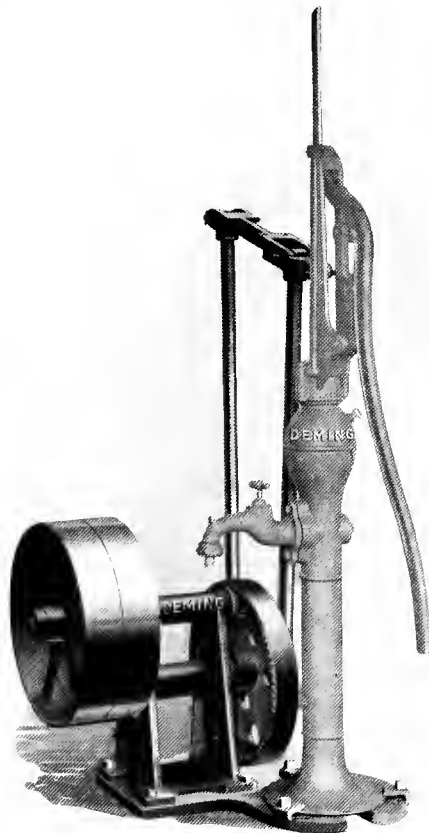
No.	Size Cyl. Inches	Suction Fitted for Pipe Inches	Dis-charge Fitted for Hose Inches	Stroke Inches	Capac-ity per Rev. Gals.	Will Lift and Force in Feet	Weight Pounds	IRON		BRASS CYLINDER	
								Cipher	Price	Cipher	Price
4	3	2	1 1/4	6	.38	100	130	FEASTED	\$40 00	FEDERATE	\$ 65. 00
6	3 1/2	2 1/2	1 1/2	6	.50	80	160	FEASTER	47. 00	FEDERATION	78. 00
8	4	2 1/2	1 1/2	6	.65	75	185	FEASTING	55. 00	FEEBLE	95. 00
10	4 1/2	3	2	6	.83	60	225	FEATHER	70. 00	FEELER	115. 00
16	6	4	2 1/2	8	1.96	50	475	FEATURE	110. 00	FEELING	170. 00

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Improved Pumping Jack With Sub-Base for Windmill Standard

Fig. 718



For operating windmill standards such as our Figs. 441, 444, 445, etc., by belt drive from gasoline engine, electric motor, horse power, etc., Fig. 718 is very desirable. Tight and loose pulleys are furnished for driving by belt. A sub-base is provided to receive the pump standard.

The standard shown in outline is NOT INCLUDED IN THE PRICE. Illustration shows plainly how Fig. 718 is used.

This jack is internally geared and the gears are therefore completely enclosed.

Sizes and Prices

Figure	Stroke	Tight and Loose Pulley	Gear Ratio	Weight Pounds	Cipher	Price
718	Adjustable 6, 8, and 10-in.	16 x 3	6 to 1	205	HUMDRUM	\$40.00

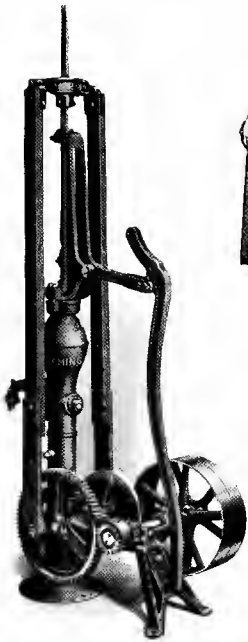
Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



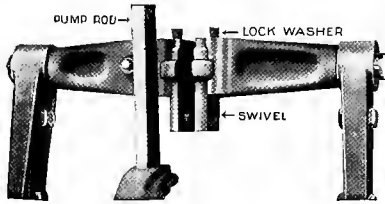
Deming Improved Pumping Jacks

For Operating Pump Standards

Fig. 747



View of No. 1 size, connected to Deming Windmill Pump Standard, Fig. 440.



Pump Stand disconnected from Jack



View of No. 2 size connected to Standard of Fig. 453.

In these jacks the rests bolt securely to platform and serve as a brace to help support the jack and brace the pump stand. The pump connection is designed to make quick change from jack to windmill or hand pumping without removing any bolts. When the pump is set directly under a windmill it can be operated by hand, by windmill or by gasoline engine.

No. 0 is not illustrated, but is in general appearance very much like No. 1, except that it is double geared.

No. 1 is single geared.

No. 2 is double geared, equally dividing the load. Has adjustable foot rest. Shafts are extra heavy.

Sizes and Prices

No.	Adjustable Stroke Inches	Backed Geared	Tight and Loose Pulleys	Weight Pounds	Cipher	*Price
0	5, 7 or 10	4 to 1	13 x 2	90	HAAF	\$10.00
1	5, 7 or 10	4 to 1	13 x 2	95	HAAK	12.00
2	5, 7 or 10	5½ to 1	13 x 2	155	HABLE	17.00

*List Prices do not include the pump shown with each of these Jacks.

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Southern Well Force Pump

With Polished Cylinder in Stock
Will Lift and Force 35 to 100 Feet

Fig. 1274

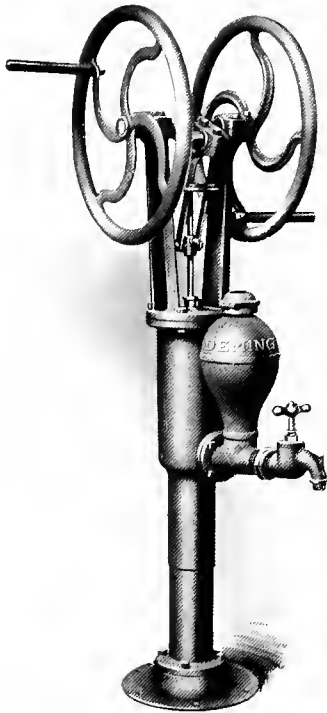


Fig. 1274 is made with two fly-wheels; a crank shaft; babbitted bearings, and a guided rod. The air chamber is provided with an upward discharge fitted for the same size of pipe as the suction.

For pumping large quantities of water, the fly-wheel and crank are preferred in some localities to the usual lever, because all strokes are of equal length, and the pump discharges the full capacity at each revolution.

When equipped with either 2, 2½, 3 or 3½-inch cylinder, Fig. 1274 will lift and force, respectively, 100, 75, 50 and 35 feet. For Fig. 1274 fitted with independent cylinders for deep wells, see list below.

Where there is liability to danger from freezing, Fig. 1274 should not be used, except when in service as a deep well pump. If plain spout is wanted instead of cock spout, deduct \$2.50 from list.

Sizes and Prices

No.	Size Cyl Inches	Fitted for Pipe Inches	Stroke Inches	Cap. per Rev. Gals.	WITH TWO FLY WHEELS			WITH ONE FLY WHEEL ONLY		
					Weight Lbs.	Cipher	Price	Weight Lbs.	Cipher	Price
4	3	1¼	6	.18	195	BELDAN	\$35 00	127	BENDING	\$32 00
6	3½	1½	6	.25	195	BENCH	40.00	130	BENDY	37.00

For Deep Wells (With Two Fly Wheels)

(Complete With Independent Cylinder, but Without Pipe and Well Rod)

Size Cylinder Inches	IRON CYLINDER				BRASS-LINED CYLINDER			
	No. 4		No. 6		No. 4		No. 6	
	Cipher	Price	Cipher	Price	Cipher	Price	Cipher	Price
2	BIAS	\$35.00	BISE	\$40.00	BICORN	\$37.00	BIGHT	\$42.00
2½	BIASED	36.00	BICEPS	41.00	BIDDEN	38.50	BIGOT	43.50
3	BIASING	36.50	BICKER	41.50	BIDE	39.00	BILBO	41.00
3½	BIBBER	38.00	BICOLOR	43.00	BIFOLD	41.00	BILE	46.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



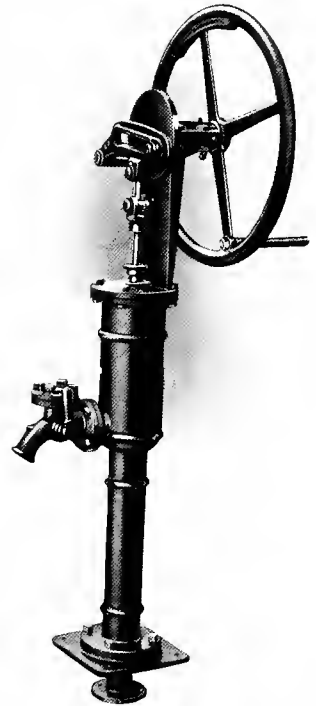
Deming "Colonial" Quick Return Force Pump

With Fly-Wheel and Compensating Lever
Will Lift and Force 35 to 100 Feet

Fig. 277

By the combination of the slotted yoke or lever, and roller crank pin, the leverage is greater on the up stroke than with the ordinary crank, which makes it very easy to operate the pump. The arrow on the face plate indicates the direction in which the crank shaft should be revolved.

The cylinder and plunger are in the stock. If wanted for other than wrought iron suction pipe, the purchaser can easily arrange suction flanges to fit the bottom flange of the pump. The three-way discharge cock makes it possible to force water to an elevated tank or through the spout opening, as desired. For Fig. 277, fitted with independent cylinders for deep wells, see list below. When equipped with either 2, 2½, 3 or 3½-inch cylinder, Fig. 277 will lift and force, respectively, 100, 75, 50 and 35 feet. If plain spout is desired instead of cock spout, deduct \$5.00 from list.



Sizes and Prices

No.	Size Cylinder Inches	Fitted for Pipe Inches	Length Stroke Inches	Weight in Pounds	Cap. per Revolution Gallons	Cipher	Price
4	3	1½	6	251	.18	BONESET	\$35.00
6	3½	2	6	260	.25	BONFIRE	40.00

For Deep Wells

(Complete With Independent Cylinders, but Without Pipe and Well Rod)

Size Cylinder Inches	IRON CYLINDER				BRASS-LINED CYLINDER			
	No. 4		No. 6		No. 4		No. 6	
	Cipher	Price	Cipher	Price	Cipher	Price	Cipher	Price
2	BILLOW	\$35.00	BINDER	\$40.00	BINOT	\$37.00	BIPONT	\$42.00
2½	BILLY	36.00	BINE	41.00	BIOLOGY	38.50	BIRCH	43.50
3	BINARY	36.50	BING	41.50	BIOTING	39.00	BIREME	44.00
3½	BINATE	38.00	BINOCLE	43.00	BIPOLAR	41.00	BIRT	46.00

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Improved Siphon Force Pumps

With Brass Cylinder and Brass Piston Rod
Will Lift and Force 25 to 100 Feet

Fig. 385



Our Siphon Pumps are so constructed that the cylinder and valves are at all times submerged and consequently always primed.

In Fig. 385 the outer case is provided with a hand-hole at the base, covered by a plate. To gain access to the lower valves, remove the hand-hole plate. Access to the plunger may be secured by removing the stuffing-box cap. Plunger may then be withdrawn. This construction makes possible the removal of the plunger and lower valve without in any way disturbing the pipe connections.

Swing jointed rod coupling will be furnished when so ordered at extra list prices as follows: 3-inch and smaller, \$1.00 extra; 3½ and 4-inch, \$1.50 extra; 5 and 6-inch, \$2.00 extra.

Fig. 386



Fig. 386 is in all respects identical with Fig. 385, except for the addition of a hand lever.

Gooseneck spouts for Fig. 386 pumps furnished at \$1.00 extra list.

Sizes and Prices

Size Cylinder	Stroke Inches	Fitted for Pipe Inches	Weight in Lbs.	Fig. 385		Fig. 386		
				Cipher	Price	Weight in Lbs.	Cipher	Price
2½	6	1½	125	DENIZEN	\$25.00	155	DECRETION	\$28.50
3	6	1½	130	DENTISTRY	27.50	165	DECROWN	31.00
3½	8	1½	130	DEPRAVE	27.50	165	DECAPO	31.00
3	8	1½	135	DEPRAVITY	30.00	170	DACOLT	33.50
2½	10	1½	205	DEPONENT	37.50	240	DECURY	42.50
3	10	2	215	DEPRIVING	42.50	260	DEFECATE	47.50
3½	10	2	135	DESPOTIC	30.00			
4	10	2	140	DESTROYER	32.50			
2½	12	1½	210	DELTOID	40.00			
3	12	1½	215	DATARY	45.00			
3½	12	2	305	DECAGON	65.00			
4	12	2	315	DECALCIFY	85.00			
5	12	2½	325	DECISORY	80.00			
6	12	3	340	DECOY	105.00			
5	16	2½						
6	16	3						

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Improved Siphon Force Pumps

With Submerged Cylinder

Will Lift and Force 25 to 75 Feet

Fig. 320



Fig. 321



Fig. 320, Submerged Cylinder Pump, for use in places where it can be located within twenty-five feet of the water, has been for years a favorite. It is always primed, therefore will draw water a longer distance than ordinary pumps. It must be protected from frost. The piston-rod is arranged for power, and a forked coupling for attaching to a wind mill wood-rod is also furnished.

Fig. 321 is identical with Fig. 320, except that it has windmill top and lever for hand use. Goose neck spout will be furnished at an extra list price of \$1.00 for Nos. 1 to 4.

Sizes and Prices

SPECIFICATION OF SIZES				Fig. 320 BRASS-LINED CYLINDER			Fig. 321 BRASS-LINED CYLINDER		
Size Cyl. Inches	Stroke Inches	Suction Pipe Inch	Discharge Pipe Inch	Weight in Lbs.	Cipher	Price	Weight in Lbs.	Cipher	Price
2½	8	1½	1½	80	DECKER	\$20 00	110	DECREASE	\$23 50
3	8	1½	1½	88	DECLAIM	22 00	118	DECREDIT	26 50
3½	10	2	2	113	DECLAIMER	30 00	148	DECRIED	35 00
4	10	2	2	135	DECLARED	34 00	170	DEDICATE	39 00
5	12	2½	2½	194	DECLENSION	52 00	229	DEDUCED	59 50
6	12	3	3	212	DECLINABLE	70 00	247	DEEDED	77 50

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342

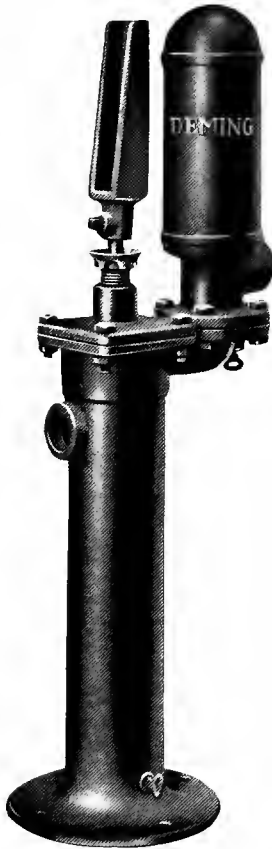


Deming Siphon Windmill Force Pump

With Brass Cylinder

Will Lift and Force 25 to 75 Feet

Fig. 387



In this pump the brass working barrel is suspended in the iron case, thus forming a reservoir.

This reservoir is always filled with water and the pump is therefore always primed. In freezing weather this water can be drained off by removing drip screw and operating pump until water is all out of cylinder. Near the top of the iron case the pump is tapped for suction pipe. The plunger rod is brass cased, and the plunger, suction valve cage and seat are all brass. The discharge pipe may be turned either to the right or to the left to suit conditions. All of the working parts may be removed by taking off the top cap which is fastened to the outer case by means of four bolts. A set screw controls the windmill connection. The inner cylinder is of heavy seamless brass tubing.

Add \$1.00 to the list price if malleable forked rods are wanted instead of windmill slide.

Sizes and Prices

Diam. of Cylinder Inches	Suction and Discharge Fitted for Pipe Inches	Capacity per Stroke Gal.	8-INCH STROKE			12-INCH STROKE			
			Approximate wt. Lbs.	Cipher	Price	Capacity per Stroke Gal.	Approximate wt. Lbs.	Cipher	Price
2½	1½	.17	70	DISTURB	\$18.50	.26	75	DITONE	\$20.00
3	1½	.24	75	DISTURBER	21.00	.37	80	DITCHER	22.50
3½	2	.33	110	DISTYLE	25.00	.50	115	DIVAN	27.50
4	2	.43	112	DITATION	30.00	.65	120	DIVINE	32.00

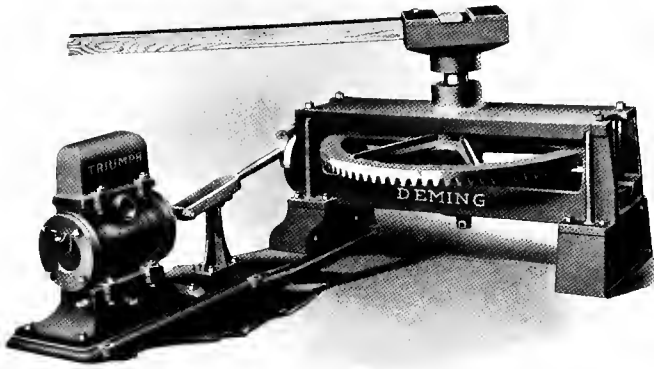
Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Triumph" Double-Acting Force Pump

Combined with Horse-power
Will Lift and Force 75 Feet

Fig. 613



When horse-power has to be substituted for steam or electric power or gasoline engine, this will be found to be a very desirable arrangement for pumping from shallow wells or streams, for irrigating on a small scale and for other requirements. The horse can make about $3\frac{1}{2}$ turns to the minute.

The horse-power is attached to the pump by means of a bevel gear, face plate and forked rod connection. The piston rod is guided so it will not get out of alignment. The horse-power has very heavy shafts, also babbitted bearings. It may be used with one or two horses. The master wheel has 84 teeth and the pinion 14. Therefore, the pinion shaft makes six revolutions to one turn of the master wheel. Lever is 10 feet long. The horse-power without the pump is designated as Fig. 700. Either one or two levers may be used, as desired, although we furnish regularly but one lever.

Our Fig. 601 "Triumph" double-acting pump is used. The piston rod is solid brass, and works through a bolted stuffing-box and gland. Valves and seats are brass and the cylinder is brass lined. A drip cock is provided to prevent freezing. At $3\frac{1}{2}$ revolutions of the horse-power the pump operates at a speed of about 21 strokes per minute. Always fitted for iron pipe, as listed, unless ordered for hose.

If brass spring piston is wanted add to list as follows:—No. 3, \$4.00; No. 4, \$6.00; No. 5, \$8.00.

Sizes and Prices

No.	Size Cylinder Inches	Suction Fitted for Pipe Inches	Discharge Fitted for Pipe Inches	Stroke Inches	Gallons per Rev.	Weights Pounds	BRASS LINED		BRASS CYLINDER	
							Cipher	Price	Cipher	Price
3	4	1½	1¼	4½	.275	850	FANCIER	\$150.00	FANTASTIC	\$215.00
4	5	2	1½	5	.490	925	FANCIFUL	175.00	FARCICAL	250.00
5	6	2½	2	5	.935	975	FANDANGO	190.00	FAREWELL	300.00

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Deming Power Air Compressor or Vacuum Pump

Fig. 680



Fig. 680 Single-Acting Power Air Compressor and Vacuum Pump is well adapted to pumping into receivers for starting gas or gasoline engines, for use in connection with dry pipe sprinkler systems, in garages, chemical works, potteries, hospitals, and by artists and dentists.

This compressor is made in the best manner possible from the best of materials. The crank shaft is of steel, and the bearings are of large dimensions, lined with the best babbit metal. The piston is of iron, packed with iron spring rings, and the valves are of steel, seating vertically on bronze seats, thereby insuring the least possible wear and minimum clearance. Oil cups are furnished.

The cylinder is thoroughly water jacketed to enable the pump to be operated continuously at the maximum rated speed and pressure. For intermittent service these compressors may be operated at one-third higher speeds and pressures than listed.

Fig. 680 standard construction includes heavy rim belt fly-wheel, as illustrated, but is also furnished with loose pulley at extra price as listed.

Fig. 680 with Type "B" Drive (Cipher, "TYPEB") consists of the standard compressor without pulley, but with sub-base and gearing connection for electric motor.

Fig. 680 with Type "C" Drive (Cipher, "TYPEC") consists of the standard pump with fly-wheel pulley, and with sub-base, short belt and spring belt tightener for connecting electric motor.

Motor is not included with Types "B" and "C" Drives, but can be furnished at extra price.

Fig. 680, Sizes, Capacities, Prices, Etc.

PISTON		Cu. Ft. Displacement Free Air per Rev.	Revs. per Minute	Cu. Ft. Displacement Free Air per Min.	Discharge Pressure Pounds	Suction Pipe Inches	Discharge Pipe Inches	Water Jacket Piping Inches	Belt Fly-Wheel	H. P. Required at Rated Speeds
Diam. Inches	Stroke Inches									
2 $\frac{3}{4}$	4	.0137	200	2.74	125	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	18 x 3	.70
3 $\frac{1}{2}$	5	.0278	175	4.86	125	1	$\frac{3}{4}$	$\frac{1}{2}$	24 x 4	1.15
4	6	.0436	150	6.54	125	1 $\frac{1}{4}$	1	$\frac{1}{2}$	30 x 4	2.00
5	6	.0681	130	10.21	125	1 $\frac{3}{4}$	1	$\frac{1}{2}$	36 x 5	2.90

PISTON		*Cipher	PRICES AND WEIGHTS							
Diam. Inches	Stroke Inches		With Fly-Wheel Pulley	Approximate Weight in Lbs.	*With Tight and Loose Pulleys	Approximate Weight in Lbs.	†With Type "B" Drive	Approximate Weight in Lbs.	†With Type "C" Drive	Approximate Weight in Lbs.
2 $\frac{3}{4}$	4	HUNGER	\$ 60.00	135	\$ 65.00	160	\$100.00	250	\$100.00	290
3 $\frac{1}{2}$	5	HUNTSMAN	90.00	260	98.00	325	135.00	400	135.00	425
4	6	HURDEN	120.00	370	130.00	450	175.00	525	175.00	550
5	6	HUNTING	140.00	500	155.00	600	200.00	675	200.00	700

*When telegraphing about compressor with tight and loose pulleys, place cipher word "LOOSPUL" immediately following cipher word for standard Fig. 680.

†When telegraphing with reference to Type "B" or "C" Drive, place the cipher word "TYPEB" or "TYPEC" respectively, immediately following the cipher word for the standard Fig. 680.



Deming Air Cooled Power Compressor

Fig. 679

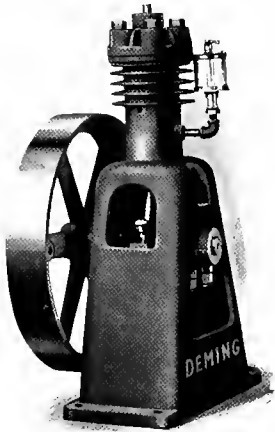


Fig. 679

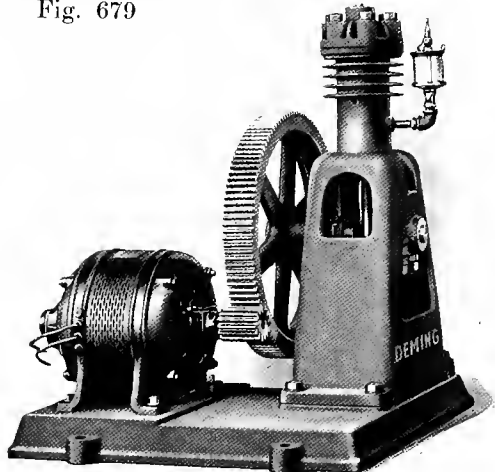


Fig. 679 with Type "B" Drive

Fig. 679 Air-Cooled, Single-Cylinder Air Compressor is designed to meet growing demand for small compressors for use in supplying compressed air for gas engine starting, garage service, and other intermittent service where the pressure does not exceed 125 pounds. For continuous work it is not recommended for more than 50 pounds pressure.

The cylinder is made with rings which provide a large radiating surface and insure cool operation. The crank shaft is of steel, accurately machined, and provided with adjustable babbitt lined bearings on both sides of the center crank. The piston is metal spring ring packed, and the discharge valve is readily accessible without disturbing piping. No suction valve is required, the air being admitted through openings in the cylinder wall.

Standard Construction includes oil cups and heavy rim fly-wheel. Special types of drive for electric motor are also furnished as described and listed below.

Type "B" Drive (Cipher, "TYPEB") includes compressor with sub-base and gearing connection for electric motor.

Type "C" Drive (Cipher, "TYPEC") includes Compressor with fly-wheel pulley, sub-base, short belt and spring belt tightener for connecting electric motor.

Motor is not included with Type "B" or "C" Drives, but can be furnished at extra price.

Fig. 679, Sizes, Capacities, Prices, Etc.

PISTON		Cubic Feet Displacement Free Air per Rev.	Revs. per Minute	Cubic Feet Displacement Free Air per Minute	Maximum Pressure Pounds Intermittent Service	Maximum Pressure Pounds Continuous Service	Discharge Pipe Inches	Belt Fly-Wheel	Horsepower Required for 125 lbs. Pressure
Diam. Inches	Stroke Inches								
3	4	.016	200	3.2	125	50	1/2	18 x 3	.75
3 1/2	5	.027	175	4.72	125	50	3/4	24 x 4	1.15

PISTON		*Cipher	PRICES AND WEIGHTS							
Diam. Inches	Stroke Inches		With Fly-Wheel Pulley	Approximate Weight in Lbs.	*With Tight and Loose Pulleys	Approximate Weight in Lbs.	†With Type "B" Drive	Approximate Weight in Lbs.	†With Type "C" Drive	Approximate Weight in Lbs.
3	4	HOLLOCK	\$45.00	135	\$50.00	160	\$85.00	240	\$85.00	240
3 1/2	5	HOLLOW	60.00	200	68.00	260	105.00	320	105.00	320

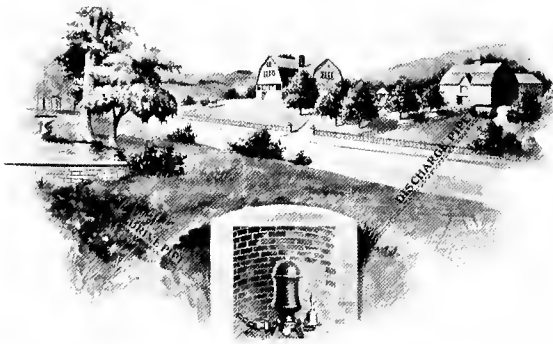
*When telegraphing about compressor with tight and loose pulleys, place cipher word "LOOSPUL" immediately following the cipher word for the standard Fig. 679.

†When telegraphing with reference to Type "B" or "C" Drive, place cipher word "TYPEB" or "TYPEC," respectively, immediately following the cipher word for the standard Fig. 679.

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



The Deming Hydraulic Ram, Fig. 690



The Hydraulic Ram in Operation

A DEMING HYDRAULIC RAM installed at a spring means a constant supply of fresh water in the home at practically no operating expense. Below is briefly explained the construction of the Hydraulic Ram; its method of operation; and the conditions under which it may be installed.

It is impossible in a general catalogue like this to give exact specifications of the various conditions under which a Hydraulic Ram will operate successfully. The illustration above will give a general idea of the utility of this wonderful machine in supplying water to a suburban or country residence. IN A SEPARATE BULLETIN, THIS SUBJECT IS MORE FULLY DESCRIBED.

Operation

Deming Hydraulic Rams are used to elevate a part of the water supply to a point higher than the level of supply. The machine in its simple form consists of a body to which is attached an impetus or overflow valve, and an air chamber under which is a check valve. In operation the supply water flows into the ram body through a drive pipe leading from a spring to the ram; the water then passes out through the impetus valve until the column attains sufficient speed to raise the impetus valve to its seat. This stops the column of water in the drive pipe and the pressure produced by stopping this column forces a small quantity through the check valve into the air chamber compressing the air slightly, when the check valve closes and prevents it from returning to the drive pipe. The air, being now at a pressure greater than that due to the head in the discharge line, forces the small quantity into the supply tank.

At the moment the check valve closes, the column of water in the drive pipe rebounds a short distance which removes the pressure from the impetus valve and permits it to open of its own weight. This completes one cycle. These movements continue automatically.

Suggestions for Installing

The LENGTH of the drive or supply pipe should not be less than five times the FALL. The Hydraulic Ram is MOST EFFICIENT when the VOLUME of the AIR CHAMBER is EQUAL to the VOLUME of the DISCHARGE PIPE.

The upper end of the drive pipe should always be a foot or more below the surface of the water. It should be located six or more inches above the bottom of reservoir and a strainer placed on end of pipe.

Pipes should be laid straight to reduce friction. Where turns are necessary, long bends are better than abrupt angles.

Locate the Ram in a masonry-lined pit, and bolt it on a LEVEL FOUNDATION. Provide drainage for waste water from the bottom of pit. Place all pipes below the frost line.

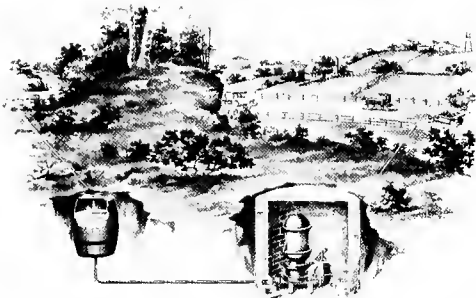
No two installations are alike; therefore we much prefer to make suggestions and give information covering each individual case.

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The Deming Hydraulic Ram, Fig. 690

Tables of Efficiency, Etc.



Ideal Arrangement for Installing Hydraulic Ram where the fall is too great or the Reservoir located considerable distance from the Ram



No. 3



No. 5



No. 8

Three
Popular Sizes
of the Seven
Deming Rams

Information We Should Have

FALL IN FEET vertically from surface of water in the supply reservoir to level of the Hydraulic Ram.

NUMBER OF GALLONS of water per minute supplied to the Ram.

ELEVATION OR HEIGHT in feet (vertically above level of Ram) at which water is to be discharged.

QUANTITY OF WATER per day of 24 hours (in gallons) required to be discharged into storage tank.

LENGTH OF DRIVE PIPE in feet. It should not be less than five times the fall to give best results. It may, however, be longer.

LENGTH IN FEET OF DISCHARGE PIPE.

ESTIMATE OF EFFICIENCY: To find the quantity of water a Deming Ram will deliver, multiply the fall in feet (from spring to Ram) by the number of gallons per minute supplied; divide the product by twice the height to which the water is to be forced; the result will be the quantity per minute discharged.

EXAMPLE OF EFFICIENCY: With a fall of six feet to the Ram from a spring flowing ten gallons per minute, and a height of 40 feet from the Ram to the point of delivery, the estimate is made as follows: $\frac{6 \times 10 \times 60}{40 \times 2} = \frac{60}{80}$ or $\frac{3}{4}$, being the quantity (in gallons) per minute the Ram should deliver. This condition requires a No. 4 or 5 Ram.

Sizes and Prices

No.	Quantity of Water supplied to the Ram Gals. per Minute	Length the Drive Pipe should be Feet	DIAMETER OF PIPE		Weights Pounds	Cipher	Price
			Drive Inches	Discharge Inches			
2	1½ to 2	12 to 50	¾	1½	28	HAUTBOY	\$ 9 00
2	1½ to 4	12 to 50	1	1½	37	HAVOC	11 00
4	3 to 7	12 to 50	1½	¾	50	HAVERSACK	14 00
5	6 to 14	25 to 100	2	1	74	HAWSER	22 00
6	12 to 25	25 to 100	2½	1½	142	HAZARD	40 00
7	20 to 60	25 to 125	4	2	150	HAZARDOUS	75 00
8	30 to 120	25 to 150	6	2½	615	HEADLONG	125 00

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



The Deming "Hydraeram"

A Modern Hydraulic Ram

Fig. 695

The apparatus represented by the annexed engraving is our new Automatic Hydraulic Pumping Engine, or Hydraulic Ram, which we designate as Fig. 695 and have given the name of "HYDRAERAM." This name has been registered at the patent office as a trade mark. We have been granted a design patent.



THE HYDRAERAM IS MORE EFFICIENT than other machines of the kind. It is new in design and construction, as may be seen by the illustration. The air chamber, base, and impetus valve chamber are cast integral. The facility with which the Hydraeram may be adapted to various conditions surpasses everything in the line of automatic pumping apparatus. The Hydraeram can be regulated without detaching any of the parts, and under favorable conditions will discharge water to a height of twenty times the amount of fall.

THE AUTOMATIC AIR SUPPLY is attained by the valve construction, and is so regulated as to give the most efficient results.

IN ORDERING A "HYDRAERAM," care should be exercised in giving us as near as possible the amount of WATER PER MINUTE that can be supplied to the machine; the amount of WATER REQUIRED every twenty-four hours; the NUMBER OF FEET FALL (vertically) that can be obtained

from the reservoir to the "Hydraeram," and the length of drive pipe; also the VERTICAL and horizontal DISTANCE the water must be DISCHARGED, i. e., height water is elevated, and length of discharge pipe. DIRECTIONS FOR SETTING AND STARTING FURNISHED WITH EACH MACHINE.

Sizes and Prices

No.	Quantity of Water Supplied per Minute to which Hydraeram is Adapted Gallons	Approximate Length of Drive Pipe Feet	SIZES OF PIPE		Extreme Height Inches	Diameter of Base Inches	Weights Pounds	Cipher	Price
			Drive Inches	Dis-charge Inches					
*10	1½ to 3	10 to 40	¾	½	12½	5½	16	HYDRUM	\$12.50
11	2 to 5	10 to 50	1	½	17	8	40	HYDRIC	15.00
12	3 to 10	15 to 50	1½	¾	23	10	45	HYDRIDE	25.00
13	6 to 15	25 to 75	2	1	29	12	150	HYDROGEN	45.00
14	10 to 25	25 to 100	2½	1¼	35	16	300	HYDROMEL	75.00

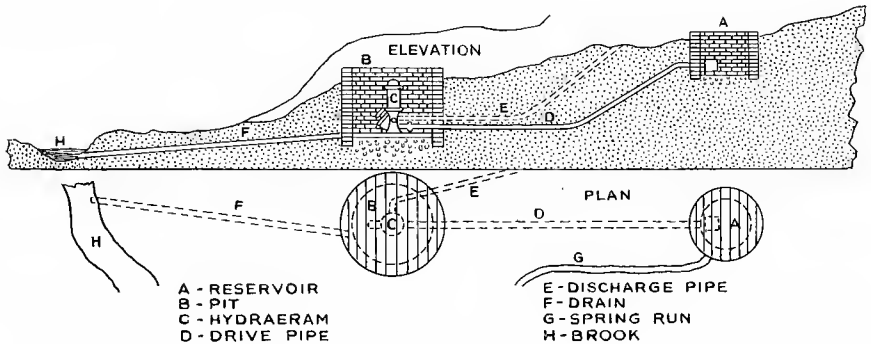
*The No. 10 Hydraeram made entirely of brass, \$30.00 list.



The Deming "Hydraeram"— Continued

Directions for Setting and Starting

THE DRIVE OR SUPPLY PIPE is best to descend from the supply reservoir and gradually assume a level position as it approaches the machine, and it should enter the reservoir far enough above the bottom for a continuous flow of clear water. A strainer over the end of pipe in the reservoir is an advantage. THE DISCHARGE OR DELIVERY PIPE is best to have a continual ascent from the machine toward the point of delivery. Below is an ideal PLAN AND PROFILE DIAGRAM, illustrating the relative position of Reservoir, Hydraeram, Pit, Drive Pipe, Discharge pipe, etc.



IN LOCATING AND INSTALLING THE HYDRAERAM or Automatic Pump, a pit should be dug in which to place the machine, so that it will not be affected by the frost. A drain should be arranged to carry off the waste water, and a reservoir or dam constructed to give the greatest fall or head of water. The length of the drive or supply pipe ought not to be much less than the height to which the water is to be raised; it may, however, be longer.

ALL SHORT TURNS OR ANGLES in the drive and discharge pipes should be avoided, and the Hydraeram should be set level. The pit is better to be mason work with cemented bottom. The machine may be screwed to a plank or timbers set in the bottom of the pit; or the foundation may be of stone or cement, leveled up, and with base bolts set in.

THE ADJUSTABLE WEIGHT on the rocker-arm should be set down toward the impetus valve where the ratio of fall to elevation is great, and for a less ratio of fall to elevation this weight should be set closer to the fulcrum or hinge. For a small amount of fall, or low head of water, the weight may sometimes be removed entirely. Experiment will determine the best position.

THE STROKE REGULATOR SCREW where the supply of water is small should be set for a short stroke of the impetus valve, which makes it possible to operate the Ram upon a smaller supply of water. If the supply is abundant, the stroke may be lengthened. By experiment it may be determined what stroke is the most satisfactory. THE AIR CHAMBER is automatically and constantly supplied with air by the peculiar action and construction of the valves.

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Geared Counter-Shaft for Operating Pumps

Fig. 699

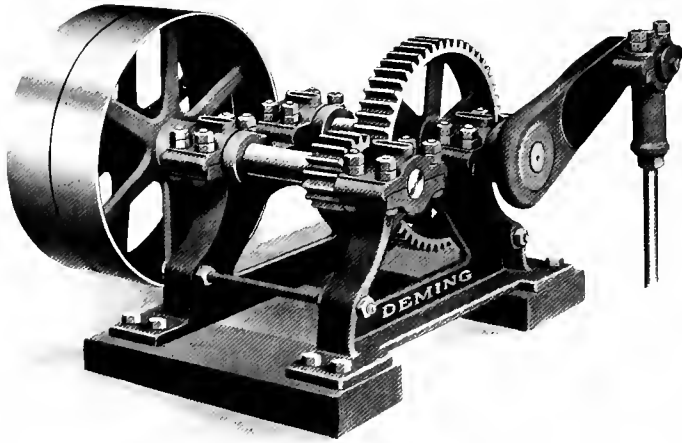


Fig. 699 is a geared counter-shaft for heavy duty, and may be used as shown or in an inverted position. Made in two sizes. Wood frame is not furnished. It is a very substantially constructed geared countershaft for use in operating various styles of pumping heads, such as our Figs. 435, 439 and 1439, also Fig. 491, etc.; also stuffing-box heads, Figs. 446, 447 and 449.

It is made in two sizes, which are adjustable for the different strokes given in the table below, and may be used as shown or in an inverted position. When wanted for use in an inverted position for bolting to ceiling, order should so specify. It is furnished with stub rod as shown.

This countershaft is designed to be driven by belt, and where the duty is not too heavy can often be used where the cost of other types of geared working heads would be prohibitive. It is not recommended for plunger loads of more than 300 pounds.

Wood frame is not furnished.

Fig. 699, Sizes, Prices, Etc.

No.	Stroke Inches	Gear Ratio	Tight and Loose Pulleys	Weights Pounds	Cipher	Price
1	6, 8, 10	3 to 1	16 x 4	340	HASSOCK	\$50.00
2	10, 12, 16, 20, 24	3 to 1	18 x 4	360	HASTLY	60.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



CENTRIFUGAL
AND
ROTARY PUMPS

FOR VARIOUS PURPOSES

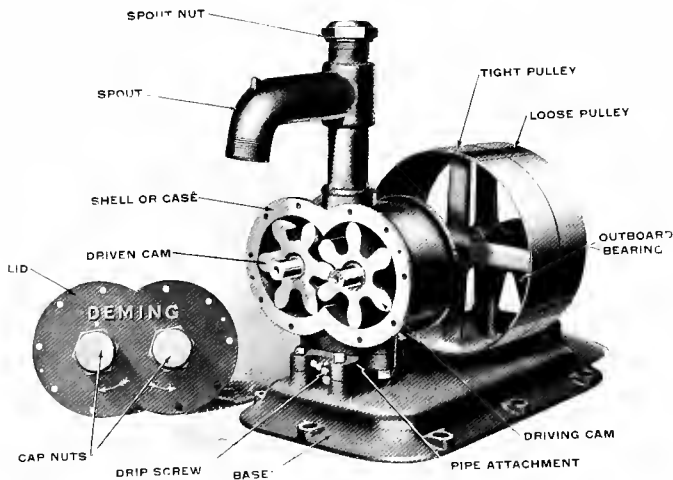
INCLUDING HAND AND POWER
ROTARY PUMPS FOR USE IN OIL
REFINERIES, CREAMERIES,
BREWERIES, DISTILLERIES,
CANNING FACTORIES, PAINT
AND CHEMICAL WORKS, ETC.
ALSO HORIZONTAL AND VERTI-
CAL CENTRIFUGAL POWER
PUMPS FOR CONTRACTORS'
USE, DRAINING AND
IRRIGATING, ETC.





Typical Deming Rotary Force Pump

Fig. 577 (In Section)



Deming Rotary Force Pumps are adapted for a suction lift of 12 to 15 feet. As a rule they may be used for a total lift and force of 60 feet, depending of course upon the conditions.

Liquids can be drawn horizontally any reasonable distance. In such case, the suction pipe should incline upward a trifle. Deming Rotary Pumps are very easy to install; it being necessary only to attach the required lengths of suction and discharge pipe to the openings in the pump.

As shown in the illustration, the working parts consist of a pair of toothed pinions, which when they revolve, mesh into each other and secure the required suction. The discharge from a rotary pump is uniform and constant. However, they are not adapted to very heavy duties. They are very much used for circulating cooling water for gasoline engines; pumping cider, vinegar, wine, milk, etc.; pumping oil, chemicals, gasoline, kerosene, etc. They are easy to clean and for that reason are often used where food products are handled in liquid form.

If hot liquids are to be pumped, we should be advised, for the reason that vapor arising from a hot liquid will prevent the pump from forming a vacuum. For priming purposes, there is a hole in the top of the pump. There is also a drain plug at the bottom. Wherever aciduous liquids are to be handled, we recommend that bronze pumps be used.

If a small quantity of oil is run through the pump before and after using, it will prevent rusting.

In order that rotary pumps be operated with maximum efficiency, they have to be very accurately made. With our special machinery for manufacturing this type of pump, we are in position to make rotary pumps which will operate to the very best advantage, under the conditions for which they are recommended.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Improved Rotary House Force Pumps

Will Lift and Force 60 Feet

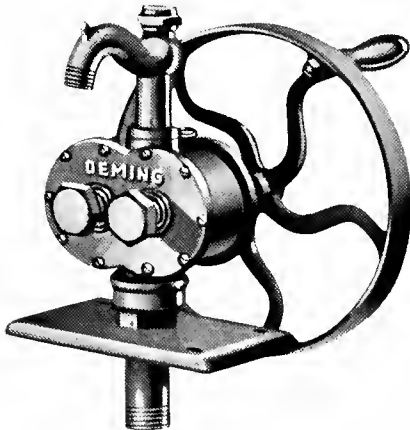


Fig. 578

Fig. 578

The base of this pump is flat and square, with a cast hub projecting below. Both suction and discharge are fitted for hose couplings but will be fitted for iron or lead pipe if so ordered. Fig. 578 has flat fly-wheel and is generally mounted on a table or bench. It is well adapted for pumping cider, vinegar, wine, milk, cream, water or oil.

Fig. 579

Rotary force pump, Fig. 579, is the same type as Fig. 578 except that it is made with a hand crank instead of fly-wheel. It is also provided with brackets for attaching to post or wall. The suction is regularly fitted for iron pipe, but will be arranged for lead pipe or hose, when so ordered, at a slight additional cost. If Fig. 579 is wanted with hand fly-wheel, add \$2.00 to the list price. By removing cap on top of spout and attaching it to end of spout, Fig. 579 is adapted to upward discharge, as also is Fig. 578.



Fig. 579

Sizes and Prices—Fig. 578

No.	Suction Fitted for Hose Inches	Capacity at 50 Revs. per Min. Gallons	Diam. Fly-Wheel Inches	Dimensions of Base Inches	Weight Pounds	IRON		BRONZE CASE AND CAMS		BRONZE	
						Cipher	Price	Cipher	Price	Cipher	Price
1	1¼	5½	14	10¼ x 7	58	GARLAND	\$19.50	GAULISH	\$41.50	GALBAN	\$ 51.00
2	1¾	7½	14	10¼ x 7	58	GARLIC	22.50	GARRISON	46.50	GALENIC	56.00
3	1½	10	14	14 x 9	78	GARMENT	26.75	GARRULITY	51.75	GALIPOT	64.00

Fig. 579

No.	Suction Fitted for Pipe Inches	Discharge Fitted for Pipe Inches	Capacity at 50 Revs. per Min. Gallons	Weight Pounds	IRON		BRONZE CASE AND CAMS		BRONZE	
					Cipher	Price	Cipher	Price	Cipher	Price
1	1	1	5½	38	GRILLY	\$17.00	GRIEVOUS	\$39.00	GRIPE	\$49.00
2	1	1	7½	48	GRIEVING	20.00	GRIFFON	44.00	GRIMY	54.00
3	1¼	1¼	10	58	GRIEVER	24.00	GRILLADE	49.00	GRIST	61.00



Deming Improved Hand Rotary Force Pump

With Barrel Attachment
Will Lift and Force 60 Feet

Fig. 576

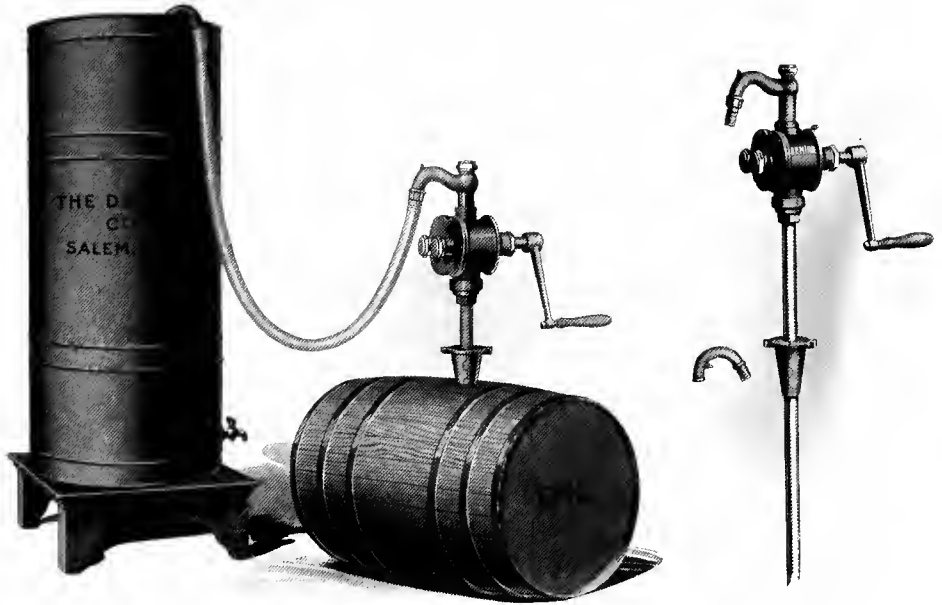


Fig. 576

Usual method of operating Fig. 576

This is an ideal pump for dealers in oils and liquors. With it, the liquid can be transferred from the cellar to any part of the building. It is a positive suction and force pump — simple in construction and easily operated. It is furnished with top discharge and spout, crank handle and iron suction pipe, the latter being fitted with a barrel attachment which will fit the bung-hole of steel drums when tapped for 1½ or 2-inch pipe. This can also be used for bungholes of wooden barrels by simply screwing it into the wood. By forcing the tapered end into the bung-hole, the pump is held firmly in place. A hook for holding discharge hose on edge of tank is also included. Hose is not furnished regularly with the pump but we can supply it in any lengths at additional cost. List prices includes hose couplings.

Sizes and Prices

No.	Suction Fitted for Pipe Inches	Discharge Fitted for Hose Inches	Capacity at 50 Revs. per Min. Gallons	Weight Pounds	IRON		BRONZE CASE AND CAMS		BRONZE	
					Cipher	Price	Cipher	Price	Cipher	Price
1	1	1	5½	43	GASEOUS	\$17.00	GASTRIC	\$39.00	GENEYAN	\$49.00
2	1	1	7½	50	GASOMETER	20.00	GATHER	44.00	GENTIAN	54.00
3	1½	1½	10	60	GASPED	24.00	GATHERED	49.00	GENTILE	61.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Improved Rotary Force Pump

Mounted on Tripod
Will Lift and Force 60 Feet

Fig. 1576



This pump is very much the same as our standard hand rotary force pumps, except that it is mounted upon a tripod of gas pipe, with feet so arranged that the tripod may be bolted to the floor if desired. The suction and discharge outlets are fitted for hose connections.

The tripod is the proper height to enable the average person to conveniently operate the pump. The suction lift should not be more than 15 feet, at which distance Fig. 1576 will lift and force liquids 60 feet.

If hot or acid liquids are to be pumped, special mention of this should be made and we will furnish the pump with bronze case and cams, or make it all bronze at extra cost. When pumping wine, liquors or saline solutions, bronze pumps should always be used. *With Fly-wheel \$2.00 extra list.*

Sizes and Prices

No.	Capacity at 50 Revs. per Min. Gallons	Suction Fitted for Hose Inches	Dis-charge Fitted for Hose Inches	Weight Pounds	IRON		BRONZE CASE AND CAMS		*BRONZE	
					Cipher	Price	Cipher	Price	Cipher	Price
1	5½	1¼	1	50	GREGEL	\$21.00	GREGREE	\$42.00	GREYHOUND	\$52.00
2	7½	1¼	1	60	GREGARIAN	23.00	GRENADIER	47.00	GRIDIRON	57.00

*All parts coming in contact with liquid are bronze.

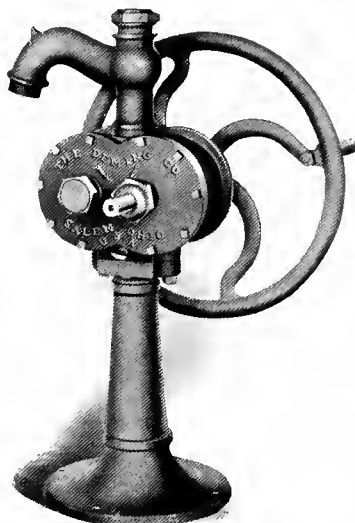
Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Improved Hand Rotary Force Pump

With Fly-Wheel and Crank
Will Lift and Force 60 Feet

Fig. 575



This is one of our most popular types of hand rotary force pumps and is largely used by brewers, wine producers, distillers, gas companies, etc. Being metallic fitted, it is especially adapted for their requirements.

As is explained at the beginning of this chapter, our rotary pumps are most accurately and carefully manufactured, the cases and cams of each size being made to exact gauges and templates. The peculiar construction of the rotary pump requires the utmost accuracy in fitting every part.

When used for handling acids, the working parts should be made of bronze metal. In such event the pump is made all bronze except the fly-wheel and base, and extra price is charged for which see list below. For pumping oil or fermented and acetous liquids Fig. 575 is very efficient, and for pumping hot or cold water, it can be used in place of an ordinary piston pump.

The fly-wheel is 20 inches in diameter. A 36-inch fly-wheel will be furnished on Nos. 4, 5 and 6 at \$4.50 extra list, when specified. Fig. 575 is regularly fitted for iron pipe.

Sizes and Prices

No.	Suction Fitted for Pipe Inches	Discharge Fitted for Pipe Inches	Capacity at 50 Revs. per Min. Gallons	Weight Pounds	IRON		BRONZE CASE AND CAMS		*BRONZE	
					Cipher	Price	Cipher	Price	Cipher	Price
1	1 $\frac{1}{4}$	1	5 $\frac{1}{2}$	70	GALLANTRY	\$20 00	GAMMON	\$42 00	GAUZY	\$ 52 00
2	1 $\frac{1}{4}$	1	7 $\frac{1}{2}$	77	GALLERY	23 00	GANDER	47 00	GAVEL	57 00
3	1 $\frac{1}{2}$	1 $\frac{1}{4}$	10	90	GALLOW	27 00	GANGRENE	52 00	GAWKY	64 00
4	2	2	12 $\frac{1}{2}$	123	GALLOWS	35 00	GANGWAY	65 00	GAYETY	87 00
5	2	2	18	139	GAMBOL	40 00	GARGLE	75 00	GECKO	105 00
6	3	2 $\frac{1}{2}$	24	192	GAMESTER	50 00	GARGOYLE	100 00	GEMINY	140 00

*All parts coming in contact with the liquid are made of bronze.



Deming Improved Power Rotary Force Pump

With Outboard Stand
Will Lift and Force 60 Feet

Fig. 535

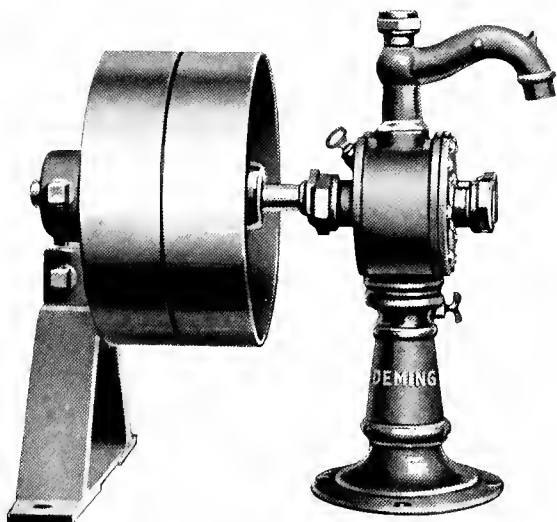


Fig. 535 is like our Fig. 575 shown on opposite page, but equipped with tight and loose pulleys and outboard stand so that it may be operated by gasoline engine, or driven by belt from any other source of power.

The standard and outboard stand are high enough to permit the use of larger pulleys than given in table.

A top discharge and spout are furnished so that liquids can be pumped to upper floors if desired. If wines, liquors, alkaline or saline solutions are to be handled, a bronze pump should be purchased.

Fig. 535 should be placed not more than 15 feet above the water.

Sizes and Prices

No.	Capacity at 100 Revs. per Min. Gallons	Diameter of Pipes		Tight and Loose Pulleys	Weight Pounds	IRON		BRONZE CASE AND CAMS		*BRONZE	
		Suction	Dis-charge			Cipher	Price	Cipher	Price	Cipher	Price
1	11	1 1/4	1	12 x 3	75	GRILLED	\$27.00	GROGGY	\$ 49.00	GRUBBER	\$ 60.00
2	15	1 1/4	1	12 x 3	80	GRILLING	32.00	GROGRAM	56.00	GRUDGE	65.00
3	20	1 1/2	1 1/4	14 x 3	95	GRIMALKIN	38.00	GROMET	63.00	GRUDGING	75.00
4	25	2	2	16 x 4	180	GRISON	48.00	GROOM	78.00	GUIDANCE	100.00
5	36	2	2	20 x 4	200	GRISTLE	54.00	GROUT	90.00	GUIDON	120.00
6	48	3	2 1/2	24 x 4	250	GROVER	80.00	GROUTING	135.00	GILDER	175.00

*All parts coming in contact with the liquid are made of bronze.

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Power Rotary Force Pumps

With Bottom Suction

Fig. 577

Fig. 577 with Tight and Loose Pulleys

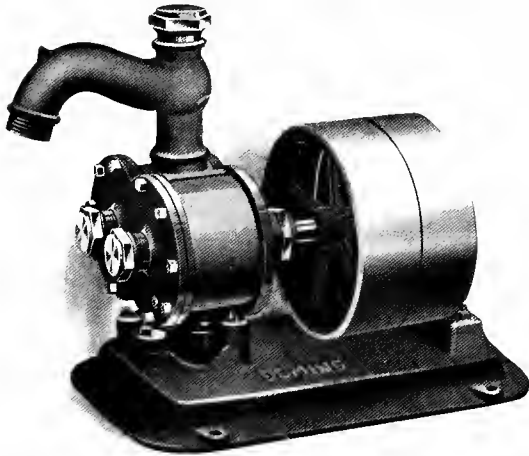
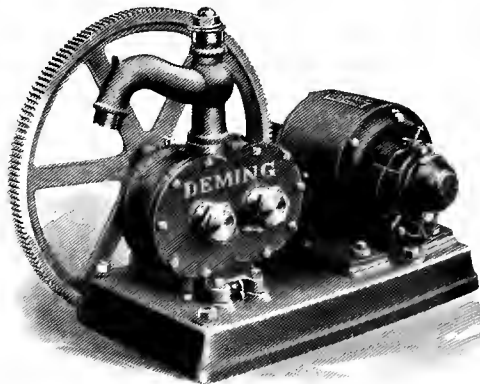


Fig. 577½ with Tight and Loose Pulleys



Fig. 577 with Type "B" Drive





Deming Power Rotary Force Pumps

With Bottom Suction
Will Lift and Force 60 Feet

Figs. 577 and 577½

Fig. 577 Rotary Force Pump is used largely in oil refineries, distilleries, creameries, wine cellars, and wherever water or other liquids must be rapidly elevated by power. It is essential that the liquid being pumped is entirely free from gritty substances, and that the suction lift should not exceed 15 feet.

Fig. 577½ is the same as Fig. 577, except is furnished for upward discharge without spout.

This pump is mounted on heavy cast iron base frame and furnished with tight and loose pulleys, while beyond the pulleys the drive shaft runs in a heavy babitted bearing. Drip cock is provided to prevent freezing. Unless otherwise ordered, leather packed suction valve is provided.

The case which receives the cams is carefully turned and bored, and is perfectly true and smooth, while the cams are accurately machined to the form which years of experience has demonstrated will produce the minimum of friction and wear, and at the same time give the best results in pumping.

For vertical discharge with Fig. 577, the cap shown in the illustration should be placed on the spout and pipe connection made on top.

This pump with Type "B" Drive (Cipher, "TYPEB") consists of the standard pump without pulleys, but with sub-base and gearing connection for electric motor HAVING SPEED OF 1200 REVOLUTIONS PER MINUTE, OR LESS. Unless otherwise specified, the motor pinion is made of rawhide. Motor can be furnished, if desired, at extra price.

Fig. 577, Sizes, Capacities, Prices, Etc.

Number	*Capacity at 100 Revs. per Min., Gal.	DIAM. OF PIPES		Elevation above Supply, Feet	Size Pulleys	Approximate Weight in Pounds	PRICES OF STANDARD FIG. 577 WITH PULLEYS						†† Extra for Type "B" Drive	Approximate Weight With Type "B" Drive
		Suction Inches	Discharge Inches				IRON		BRONZE CASE AND CAMS		†BRONZE			
							Cipher	Price	Cipher	Price	Cipher	Price		
1	11	1¼	1	60	8 x 2½	70	GAZETTEER	\$27.00	GENIAL	\$49.00	GROPER	\$60.00	\$25.00	160
2	15	1½	1	60	8 x 2½	75	GELATINE	32.00	GENITIVE	56.00	GROTTO	67.00	27.00	170
3	20	1½	1¼	60	8 x 2½	85	GENDER	38.00	GENIUS	63.00	GROVEL	75.00	30.00	185
4	25	2	2	60	12 x 3	130	GENERATE	48.00	GENTEEL	78.00	GROWLER	100.00	35.00	250
5	36	2	2	60	12 x 3	145	GENEROUS	54.00	GENTILITY	90.00	GROZZER	120.00	40.00	275
6	48	3	2½	60	16 x 4	200	GENESIS	80.00	GENTLEMAN	135.00	GRUFFLY	175.00	45.00	340

Fig. 577½, Sizes, Capacities, Prices, Etc.

Number	*Capacity at 100 Revs. per Min., Gal.	DIAM. OF PIPES		Elevation above Supply, Feet	Size Pulleys	Approximate Weight in Pounds	PRICES OF STANDARD FIG. 577½ WITH PULLEYS						†† Extra for Type "B" Drive	Approximate Weight With Type "B" Drive
		Suction Inches	Discharge Inches				IRON		BRONZE CASE AND CAMS		†BRONZE			
							Cipher	Price	Cipher	Price	Cipher	Price		
1	11	1¼	1¼	60	8 x 2½	65	GRADED	\$26.00	GRAFTED	\$48.00	GRAINAGE	\$58.00	\$25.00	155
2	15	1½	1½	60	8 x 2½	70	GRADING	31.00	GRAFTING	55.00	GRAINY	65.00	27.00	165
3	20	1½	1½	60	8 x 2½	80	GRADELY	37.00	GRAFTER	62.00	GRAITH	73.00	30.00	180
4	25	2	2	60	12 x 3	120	GRADIENT	46.00	GRAIL	76.00	GRALLIC	96.00	35.00	240
5	36	2	2	60	12 x 3	130	GRAFF	52.00	GRAINED	88.00	GRAM	116.00	40.00	260
6	48	3	2½	60	16 x 4	180	GRAFT	77.50	GRAINING	132.50	GRAMPLE	170.00	45.00	320

*When used for pumping oil against heads of thirty feet or less, these pumps may be operated at 200 revolutions per minute or less.

†All parts which come in contact with the liquid are made of bronze.

††When telegraphing with reference to Type "B" Drive, place the cipher word "TYPEB" immediately after the cipher word for the standard belt-driven pump.

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Deming Power Rotary Force Pumps

With Side Suction

Figs. 531 and 532

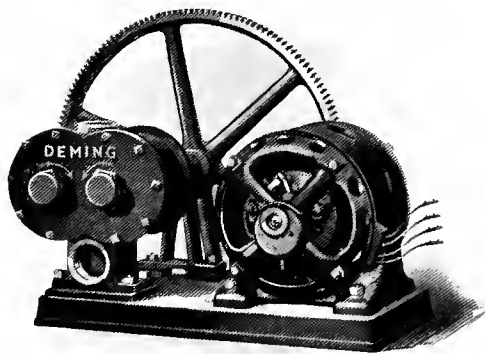
Fig. 532 with Tight and Loose Pulleys



Fig. 531 with Tight and Loose Pulleys



Fig. 531 with Type "B" Drive Pulleys





Deming Power Rotary Force Pumps

With Side Suction
Will Lift and Force 60 Feet

Figs. 531 and 532

These pumps with outboard bearings are mounted on cast iron base which insures accurate alignment. The tight and loose pulleys make a convenient method for starting and stopping. Drain plug is provided to prevent freezing.

They are designed for use in oil refineries, creameries, wine cellars and wherever water or other liquids are to be rapidly elevated by power. It is essential that the liquid being pumped be entirely free from gritty substances.

These pumps are fitted for side suction, making it more convenient to arrange the pipe connections.

The suction lift should not be more than 15 feet and a total lift and force of 60 feet.

Fig. 531 is threaded for suction and discharge pipe as listed.

Fig. 532 is made with a discharge spout which furnishes a convenient means of attaching a hose to the discharge.

Type "B" drive consists of the standard pump without pulleys, but with heavy cast iron sub-base and gearing connection for SLOW SPEED electric motor. Unless otherwise specified, the motor pinion is made of rawhide. Motor can be furnished if desired, at extra cost, also automatic controller for motor.

Fig. 531, Sizes, Capacities, Prices, Etc.

Number	*Capacity at 100 Revs. per Min., Gal.		DIAM. OF PIPES		Elevation above Supply, Feet	Size Pulleys	Approximate Weight in Pounds	PRICES OF STANDARD FIG. 531 WITH PULLEYS						†† Extra for Type "B" Drive	Approx. Weight with Type "B" Drive
	Suction Inches	Discharge Inches	IRON					BRONZE CASE AND CAMS		†BRONZE					
			Cipher	Price				Cipher	Price	Cipher	Price				
1	11	1 1/4	1 1/4	60	10 x 2 1/2	70	GASHFUL	\$29.00	GELDED	\$51.00	GENTLE	\$62.00	\$25.00	160	
2	15	1 1/4	1 1/4	60	10 x 2 1/2	75	GAVOT	34.00	GELDING	58.00	GENTLEST	69.00	27.00	170	
3	20	1 1/2	1 1/2	60	10 x 2 1/2	85	GAWBY	40.00	GELDER	65.00	GENTLY	77.00	30.00	185	
4	25	2	2	60	16 x 3	130	GAYER	52.00	GELLY	82.00	GENUS	104.00	35.00	250	
5	36	2	2	60	16 x 3	140	GAYEST	58.00	GEMARA	94.00	GHERKINS	124.00	40.00	270	
6	48	3	2 1/2	60	24 x 4	205	GAZEFUL	87.50	GENERAL	142.50	GILDING	183.00	45.00	345	

Fig. 532, Sizes, Capacities, Prices, Etc.

Number	*Capacity at 100 Revs. per Min., Gal.		DIAM. OF PIPES		Elevation above Supply, Feet	Size Pulleys	Approximate Weight in Pounds	PRICES OF STANDARD FIG. 532 WITH PULLEYS						†† Extra for Type "B" Drive	Approx. Weight with Type "B" Drive
	Suction Inches	Discharge Inches	IRON					BRONZE CASE AND CAMS		†BRONZE					
			Cipher	Price				Cipher	Price	Cipher	Price				
1	11	1 1/4	1	60	10 x 2 1/2	75	GLEAN	\$30.00	GLOOMILY	\$52.00	GNOME	\$64.00	\$25.00	165	
2	15	1 1/4	1	60	10 x 2 1/2	80	GLEANER	35.00	GLOSSIST	59.00	GNOMIC	71.00	27.00	175	
3	20	1 1/2	1 1/4	60	10 x 2 1/2	90	GLEANING	41.00	GLOSSY	66.00	GNOMICAL	79.00	30.00	190	
4	25	2	2	60	16 x 3	140	GLOOM	54.00	GLUTEN	84.00	GOPPISH	108.00	35.00	260	
5	36	2	2	60	16 x 3	155	GLOOMED	60.00	GLUTENATE	96.00	GORGET	128.00	40.00	285	
6	48	3	2 1/2	60	24 x 4	225	GLOOMING	90.00	GLUTINOUS	145.00	GORHEN	188.00	50.00	365	

*When used for pumping oil against heads of 30 feet or less, these pumps may be operated at 200 revolutions per minute or less.

†All parts which come in contact with the liquid are made of bronze.

††When telegraphing with reference to Type "B" Drive, place the cipher word "TYPEB" immediately after the cipher word for the standard belt driven pump.



Deming Power Rotary Force Pump

Will Lift and Force 60 Feet

Fig. 595



Fig. 595

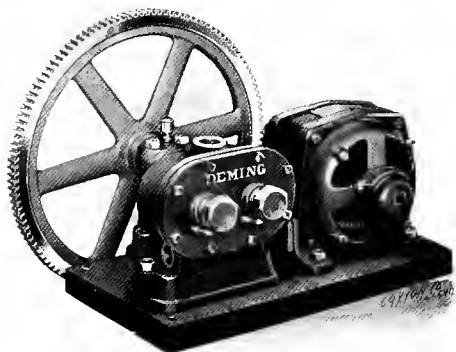


Fig. 595 with Type "B" Drive

Fig. 595 Rotary Pump is designed to meet the demand for pumps for pumping small quantities of oil or gasoline. It is also recommended for pumping water for house supply or other purposes where power is available, and the liquid is entirely free from gritty substances.

It is simple in construction, consisting of a pair of special machine-cut gears running together in a tight case. It is mounted on a substantial iron base frame with babbitted bearing for shaft. Suction connection at either side, and discharge at the top. Price includes tight pulley only, but loose pulley will be supplied to order.

Fig. 595 with Type "B" Drive (Cipher, "TYPEB") is identical in construction with the Fig. 595, except that it is mounted on a substantial cast iron base with electric motor and connected to the motor by gearing. The motor speed should not exceed 1,800 revolutions per minute for the maximum pump speed of 200. Motor is not included in price, but will be furnished at extra charge.

Fig. 595, Prices, Etc.

No.	Capacity at 200 Revs. per Min. Gallons	Suction Inches	Dis-charge Inches	Pulley	Maximum Dis-charge Pressure Pounds	IRON		*BRONZE		Extra for Loose Pulley	†Extra for Type "B" Drive
						Cipher	Price	Cipher	Price		
1	10	1	1	10 x 2 1/2	50	GOURD	\$25 00	GOUT	\$55.00	\$5.00	\$25.00

*All parts which come in contact with the liquid are made of bronze.

†When telegraphing with reference to Type "B" Drive, place the cipher word "TYPEB" immediately after the cipher word for the standard belt driven pump.

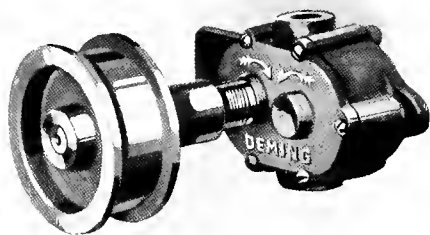
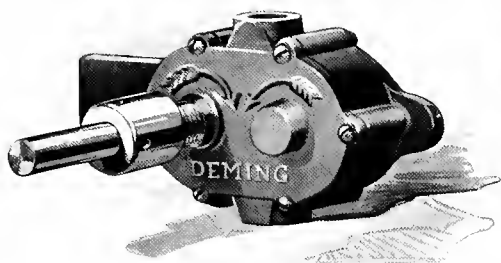
Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Special Power Rotary Oil Pump

For Lubricating Machine Tools
Will Lift and Force 60 Feet

Fig. 580



With Pulley

Fig. 580 represented by the annexed cut is a Rotary Force Pump which has been designed to meet the requirements of machine tool manufacturers, for lubricating special screw threading and tapping tools. A bracket is attached to the pump, by means of which it may be bolted to the machine.

This pump may also be used for pumping small quantities of water for house supply where it can be operated by electric motor or other power, such as small gas engine. It is compact and takes up but little space. The pump should not be set more than 10 to 15 feet above the liquid, preferably as near to it as possible.

This little pump can be run with safety as high as 150 revolutions per minute, but 100 is about the proper speed. It is made in bronze only on special order. The diameter of shaft is $\frac{3}{4}$ inch, and the length $2\frac{3}{4}$ inches from stuffing-box to outer end.

A pulley of proper size should be attached to the shaft and the Pump Bracket fastened rigidly to the machine tool if thus used, or to a wall or upright timber if used for water supply as suggested above.

Can be used as either a right or left hand pump.

When fitted with $1\frac{1}{2}$ x 4-inch flanged pulley, add \$2.00 to the list price.

Sizes and Prices

Suction Fitted for Pipe Inches	Discharge Fitted for Pipe Inches	Capacity per Minute at 100 Rev. Gallons	Weight Pounds	IRON		BRONZE	
				Cipher	Price	Cipher	Price
$\frac{1}{2}$	$\frac{1}{2}$	1	12	GARROT	\$15.00	GARROTER	\$25.00

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Vertical Centrifugal Pumps

Figs. 596 and 597 Submerged and Suction Types

Fig. 596 Submerged Pump, shown on opposite page, is placed below the surface of the liquid to be pumped, requires no priming, and is always ready to start. It is used largely in draining coffer-dams, sewers and various kinds of excavations. When made of brass this pump is also extensively used by tanners.

The pump is very strongly built, and is furnished complete with short shaft and coupling, one bearing, pulley to go on connecting shaft, and discharge elbow, as shown. If extra shafting and bearings are required, state distance from foundation on which pump sets to center of pulley.

Fig. 597 Suction Pump is used for pumping out pits or excavations of any kind where the supply is either below the pump, or sometimes above (as it will also run submerged), and where the use of a horizontal pump is not possible. The pump must be primed before starting if the liquid is below it.

The yoke supports the entire weight of the shaft and is easy of access for attention. The gland is provided with a waterseal. These pumps are furnished with the same fittings as stated above for the submerged type. *Prices on brass pumps given on application.*

Sizes, Capacities, Prices, Etc.

No. Pump (Diam. Discharge Opening)	Economical Capacity in Gallons per Minute	Horse Power required for Each Foot Elevation	Diameter and Face of Pulley Inches	Floor Space Required in Inches	Distance from Bottom of Pump to Center of Coupling	Coupling Bored for Connecting Shaft Inches	Price Extra Bearings Each	Price Extra Coupling Each
1½	70	.058	5 x 6	17 x 21	2 ft. 9 in.	1	\$1.00	\$1.50
1¾	90	.075	6 x 6	21 x 29	3 ft. 0 in.	1	1.00	1.50
2	120	.10	7 x 8	23 x 30	3 ft. 4 in.	1½	1.50	2.00
2½	180	.15	7 x 8	24 x 30	3 ft. 4 in.	1½	1.50	2.00
3	260	.22	7 x 8	25 x 32	3 ft. 6 in.	1½	1.50	2.00
4	470	.30	8 x 10	29 x 39	4 ft. 0 in.	1½	2.00	2.50
5	735	.45	10 x 10	34 x 45	4 ft. 7 in.	1½	2.50	3.00
6	1050	.59	12 x 12	37 x 48	4 ft. 7 in.	1½	3.00	3.50
8	2000	1.00	18 x 12	45 x 56	5 ft. 5 in.	2	4.00	4.00
10	3000	1.52	20 x 12	51 x 68	5 ft. 5 in.	2	4.00	4.00
12	4200	2.00	24 x 14	63 x 72	6 ft. 0 in.	2½	5.00	5.50
15	7000	3.50	30 x 16	77 x 102	6 ft. 6 in.	3¼	8.00	8.00
15*	7000	3.50	30 x 15	60 x 71	6 ft. 6 in.	3¼	8.00	8.00

Fig. 596

Fig. 597

No. Pump (Diam. Discharge Opening)	Fig. 596		Fig. 597			
	Shipping Weight Pounds Submerged Type	Cipher	Price Complete as per Foot Note, Sub- merged Type	Shipping Weight, Pounds Suction Type	Cipher	Price Complete as per Foot Note, Suction Type
1½	110	GIVING	\$ 40.00	135	GRAMPUS	\$ 62.00
1¾	165	GIZZARD	50.00	200	GRIDDLE	78.00
2	198	GLACIAL	65.00	275	GRANARY	100.00
2½	220	GLACIFER	80.00	300	GRANDITY	124.00
3	235	GLADDEN	95.00	340	GRANDIEL	147.00
4	380	GLADIATOR	119.00	495	GRANTINE	170.00
5	605	GLADLY	140.00	785	GRANNY	216.00
6	850	GLADNESS	170.00	1050	GRANTEE	285.00
8	1320	GLAMOUR	265.00	1710	GRANTOR	445.00
10	1430	GLANCE	330.00	1925	GRANTULE	550.00
12	2640	GLANCING	420.00	3000	GRAPE	700.00
15	5500	GLARING	600.00	6000	GRAPHIC	1000.00
15*	2650	GUILDABLE	480.00	4000	GRAPLINE	800.00

*Refers to Low-Lift Pumps good for 25 feet maximum elevation.

Each pump is furnished complete with discharge elbow, one pair couplings, pulley and one bearing. For table of revolutions required to lift water to different heights, see opposite page.

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TRIPLEX POWER PUMPS

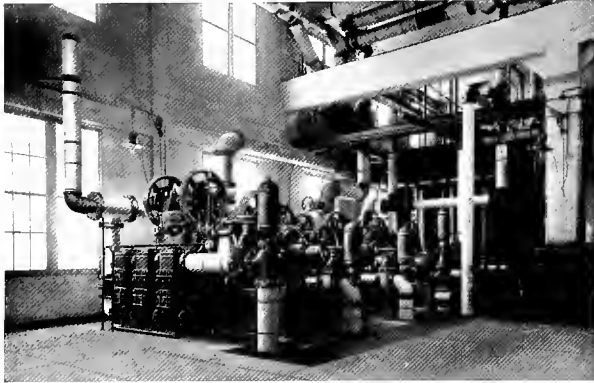
SINGLE
AND DOUBLE-ACTING

FOR BOILER FEEDING, MINE
PUMPING, WATER WORKS,
SEWAGE PUMPING, BRINE CIR-
CULATION, PAPER MILL PUMP-
ING, HYDRAULIC PRESSURE
ACCUMULATORS, FIRE PROTEC-
TION SERVICE, RAILWAY WATER
SUPPLY, HYDRAULIC ELEVATOR
SERVICE, PRIVATE WATER
SUPPLY, IRRIGATING, ETC., FOR
OPERATION BY ELECTRIC
OR OTHER POWER





Deming Triplex Power Pumps For Operation By Any Power



Installation of Deming Triplex Power Pumps in the plant of the Eastman Kodak Co., Rochester, New York

Our complete line of triplex power pumps is covered by a separate 192-page special power pump catalogue. However, to give a general idea of the construction of these pumps, we illustrate in this section a few of the most popular types.

Deming Triplex Power Pumps are for operation by electric motors, gas, gasoline or steam engines, water wheels, etc., either belt driven or direct connected to the driver. They are very much more economical to operate than the direct acting steam pump and will show savings of two-thirds and often more when compared with costs of steam pumping. When electric driven, they can be installed in any convenient place without reference to the location of a central power plant.

Deming Triplex Pumps embody the principle of the three-throw crank shaft, with the crank pins at an angle of 120 degrees with each other, by which arrangement the strokes follow and overlap one another. This results in a continuous and uniform action upon the fluid being pumped, and insures an easy flow through the delivery pipe, with a corresponding high degree of efficiency in the operation of the pump.

They are regularly made with capacities from 300 gallons to 60,000 gallons per hour, and on special orders will be built in much larger sizes. A brief summary of the many different uses for Deming Triplex Pumps is given below:

BELT DRIVEN: For waterworks, boiler feeding, paper and pulp mills, and for all kinds of factory pumping.

ELECTRIC DRIVEN: For waterworks, compression and open tank pumping for private water supply, fire service, boiler feeding, brine circulating, hydraulic elevators, hydraulic pressure accumulators, mine pumping, irrigating, etc.

GAS OR GASOLINE DRIVEN: For waterworks, railway tank service, private water supply, mine pumping, irrigating, etc.

WATER WHEEL DRIVEN: For irrigating and other purposes.

We invite correspondence with reference to special pumping equipment, and will gladly prepare and submit estimates on pumps to satisfactorily meet existing conditions.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Information We Should Have to Furnish an Intelligent Estimate on Deming Triplex Power Pumps

It will greatly facilitate correspondence if our customers, in writing for quotations, will advise us fully of their requirements. In order that we may recommend and quote on the best pump to meet these requirements, IT IS NECESSARY THAT WE KNOW:

FIRST: For what purpose the pump is to be used.

SECOND: The maximum quantity to be pumped per minute, per hour, or per day of twenty-four hours.

THIRD: To what height the liquid is to be lifted by suction, and the diameter and length of the suction pipe.

FOURTH: The height, or pressure, against which liquid is to be discharged, also diameter and length of discharge pipe.

FIFTH: Whether the liquid to be pumped is hot or cold, salt or fresh, acid, clear, thick or gritty.

SIXTH: Power available for driving the pump.

IF THE PUMP IS TO BE DRIVEN BY ELECTRIC MOTOR, WE SHOULD KNOW:

FIRST: Whether the current available is direct or alternating. If direct, state the voltage, and if alternating, state voltage, number of cycles and phase.

SECOND: Whether the pump is to be driven by belt from motor, or to have same direct connected by gearing, or otherwise.

IF THE PUMP IS TO BE DRIVEN BY GAS OR GASOLINE ENGINE, WE SHOULD KNOW:

FIRST: Whether it is to be driven by belt from engine, or direct connected by friction cut-off coupling.

SECOND: If by friction coupling, whether pump and engine are each to be mounted on masonry foundations, or furnished with cast iron bed plate extending under both, also the speed of the engine.

IF PUMP IS TO BE DRIVEN BY STEAM ENGINE, WE SHOULD KNOW:

FIRST: The steam pressure available at the engine.

SECOND: Whether vertical or horizontal engine is wanted.

THIRD: Whether connection is to be made by flanged coupling or by friction coupling.

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Single-Acting Triplex Plunger Pump

Fig. 50, for General Service

Fig. 50 Single-Acting Triplex Pump is designed for water works, hydraulic elevator service, boiler feeding, pulp grinders and for general water supply.

Specifications

FRAME consists of two standards, and includes crosshead guides and main crank shaft bearings, the latter being lined with best anti-friction metal. In sizes 4 x 4 and smaller the frame is cast in one piece with the cylinders.

CRANK SHAFT is of best open hearth steel casting in one piece.

GEARING is machine cut, and is double in 10-inch stroke sizes, and in sizes 11 x 12 and larger. Other sizes made with double gearing at extra price.

PINION SHAFT is of steel, running in boxes lined with best anti-friction metal, and bolted to the main housings.

CONNECTING RODS, in sizes 4 x 6 and larger, have bronze boxes with wedge and screw adjustment at crosshead end, and marine type babbitted boxes at crank end. Smaller sizes have bronze bushings at crosshead ends.

CROSSHEADS run in bored guides, sizes 4 x 6 and larger having adjustable bronze shoes.

PLUNGERS are of hard, close-grained cast iron, finished true and smooth, and reciprocate through packing of ample depth.

CYLINDERS AND BASE are in one casting in sizes 10 x 10 and smaller, and in larger sizes the cylinders are in three separate castings bolted to the base.

VALVE CHAMBERS, in sizes 3½ x 4 and larger, are separate castings bolted to the cylinders. They are of liberal proportions, affording large valve area, and all valves are readily accessible.

VALVES for cold water are rubber discs, protected on top from cylindrically wound springs by brass plates. For hot water either special hard composition valves or bronze valves are furnished as ordered.

VALVE SEATS are of bronze, screwed into decks, and are of the grid type. Iron seats and valves furnished when conditions require.

AIR CHAMBER furnished when specified. Vacuum Chamber to order.

GREASE CUPS, or Oil Cups if specified, and wrenches furnished with all pumps.

SPECIAL CONSTRUCTION: Pumps furnished with brass cased or solid bronze plungers, and bronze lined stuffing boxes and glands, with rawhide pinions, or otherwise varied from standard construction, at extra price.

For different Types of Drive for pumps direct connected with electric motor, gas engine, or other motive power, see pages 208 to 212, inclusive.

For table of power to operate, see "Engineering Information."

Fig. 50, Standard Sizes, Capacities, Etc.

PLUNGERS		CAPACITY			Maximum Working Pressure Pounds	DIAM. OF PIPES		Gear Ratio	*Tight and Loose Pulleys	Cipher
Diam. Inches	Stroke Inches	Gallons per Rev.	Usual Revs. per Min.	Gallons per Min.		Suction Inches	Dischrg. Inches			
2	2	.081	70	5.67	150	1½	1	5 to 1	8 x 2	OBESE
2½	2	.127	70	8.89	150	1½	1	5 to 1	10 x 2	OBELIZE
2½	3	.19	60	11.4	150	2	1½	5 to 1	12 x 3	OAKEN
3	3	.27	60	16.2	150	2	1½	5 to 1	14 x 3	OATH
3½	3	.37	60	22.	150	2	1½	5 to 1	16 x 3	OAKLING
3½	4	.50	60	30.	150	2½	2	5 to 1	16 x 4	OBELUS
4	4	.65	60	39.	150	2½	2	5 to 1	18 x 4	OAKUM
4	6	.98	60	59.	160	2½	2	5 to 1	20 x 5	OARSMAN
4½	6	1.24	60	74.	150	3	2½	5 to 1	20 x 5	OAKY
5	6	1.53	60	91.	150	3	2½	5 to 1	24 x 5	OASIS
5½	8	2.46	60	147.	150	4	3	5 to 1	28 x 6	OATMEAL
6	8	2.94	55	161.	140	4	3	5 to 1	30 x 6	OBDDURATION
7	8	4.00	55	220.	150	5	4	5 to 1	30 x 8	OBDDURATE
8	8	5.22	55	287.	150	5	4	5 to 1	36 x 8	OBITER
8½	8	5.90	55	324.	140	6	5	5 to 1	36 x 8	OBDDURE
8	10	6.52	50	326.	140	6	5	5 to 1	36 x 8	OVERCOAT
9	10	8.26	50	413.	160	8	6	5 to 1	42 x 10	OBLOQUY
10	10	10.20	45	459.	150	8	6	5 to 1	42 x 12	OBSIGNATE
10	12	12.24	42	514.	140	8	8	5 to 1	42 x 14	OBJURATION
11	12	14.81	42	622.	160	10	8	5 to 1	48 x 14	OBDDUCT
12	12	17.62	42	740.	150	10	8	5 to 1	48 x 16	OBDDUCTION
12	14	20.56	40	822.	150	12	10	5 to 1	48 x 18	OBDSERVANCE
13	14	24.12	40	965.	140	12	10	5 to 1	48 x 20	OBDSERVANT

*Note.—Sizes 9 x 10 and larger regularly furnished with tight pulley only.



Deming Single-Acting Triplex Plunger Pump

Fig. 50, for General Service

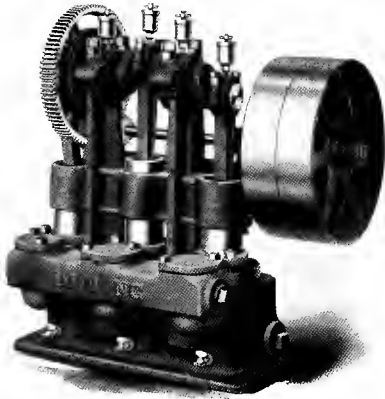


Fig. 50, Sizes $3\frac{1}{2} \times 3$ and smaller

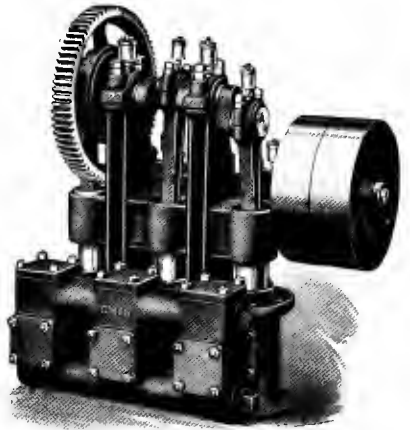


Fig. 50, Sizes $3\frac{1}{2} \times 4$ and 4×4

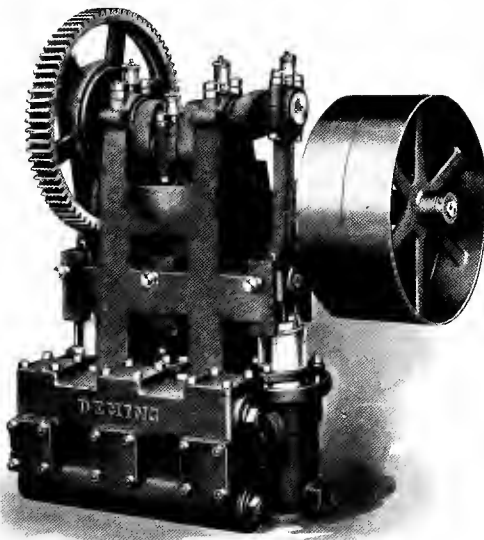


Fig. 50, Sizes 4×6 to 5×6

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Deming Single-Acting Triplex Plunger Pump

Fig. 50, for General Service

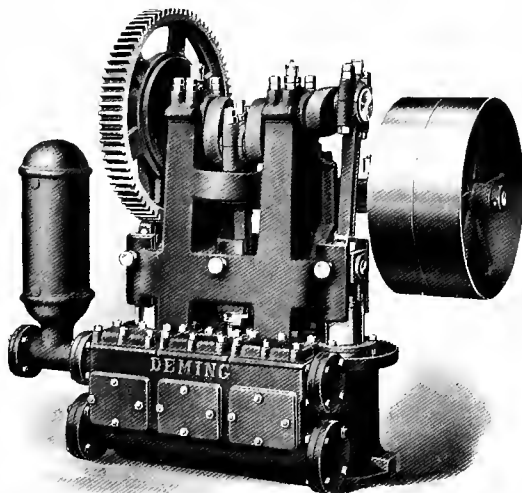


Fig. 50, Sizes $5\frac{1}{2}$ x 8 and 6 x 8

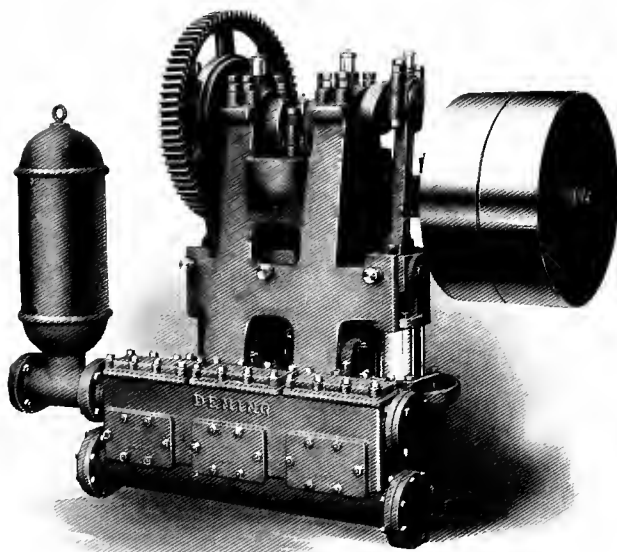


Fig. 50, Sizes 7 x 8 to 8 x 10



Deming Single-Acting Triplex Plunger Pump

Fig. 50, for General Service

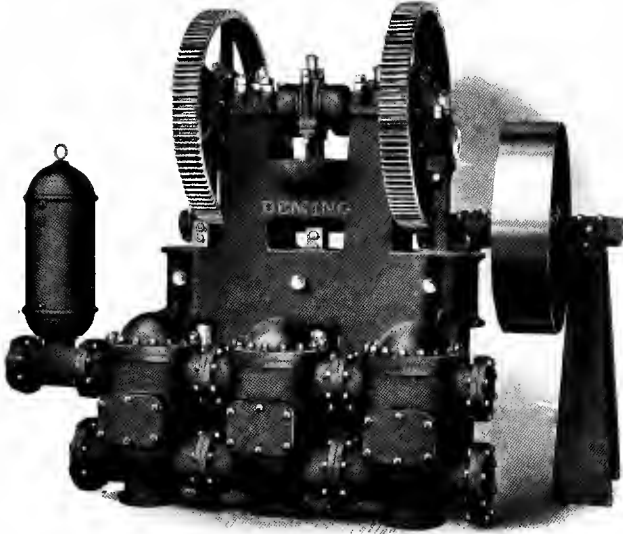


Fig. 50, Sizes 9 x 10 and 10 x 10

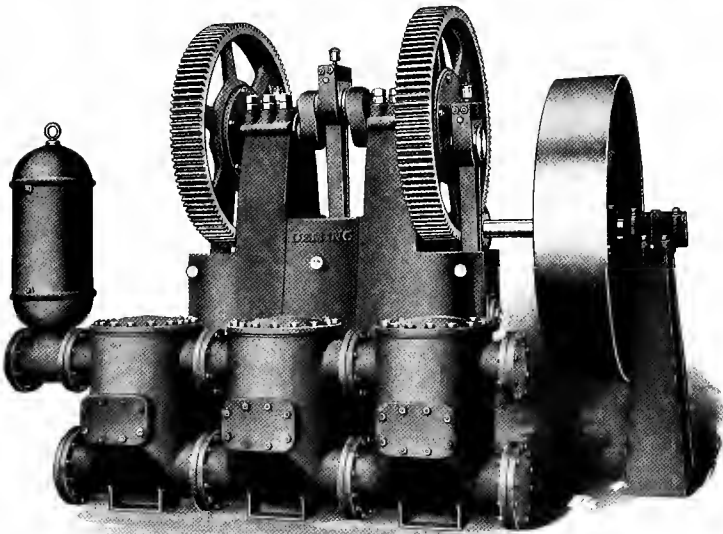


Fig. 50, Sizes 11 x 12 and larger



Deming Single-Acting Triplex Plunger Pump

Fig. 40, for Medium Service

Fig. 40 Single-Acting Triplex Pump is designed for medium heavy service, such as circulating brine, tank supply for factories, railway stations, etc.

Specifications

FRAME consists of two standards, and includes the crosshead guides and main crank shaft bearings, the latter being lined with best anti-friction metal. In sizes $5\frac{1}{2} \times 6$ and smaller the frame is cast in one piece with the cylinders.

CRANK SHAFT is of best open hearth steel casting in one piece.

GEARING is machine cut, and is double in sizes 12×14 and larger.

PINION SHAFT is of steel, running in boxes lined with best anti-friction metal and bolted to main housings.

CONNECTING RODS, in sizes 7×8 and larger, have bronze boxes with wedge and screw adjustment at crosshead ends, and marine type babbitted boxes at the crank ends. Smaller sizes have bronze bushings at crosshead ends.

PLUNGERS are of close-grained gray iron, turned and ground true and smooth, and have crossheads with bronze shoes adjustable for wear.

CYLINDERS and base are in one casting, except in 12-inch stroke sizes which have cylinders in separate castings.

VALVE CHAMBERS in all sizes except $5\frac{1}{2} \times 8$ and 6×8 are in separate castings bolted to cylinders. They have large valve area, and all valves are readily accessible.

VALVES for cold water are rubber discs, protected on top from cylindrically wound springs by brass plates. For hot water, either special composition valves or bronze valves are furnished as ordered.

VALVE SEATS are of bronze, grid type, screwed into the decks. Iron seats and valves furnished when conditions require.

AIR CHAMBER furnished when specified. Vacuum Chamber to order.

GREASE CUPS, or Oil CUPS if specified, and wrenches furnished with all pumps.

SPECIAL CONSTRUCTION: Pumps furnished with brass cased or solid bronze plungers, and bronze lined stuffing boxes and glands, with rawhide pinions, or otherwise varied from standard construction, at extra price.

For different Types of Drive for pumps in connection with electric motor, gas engine or other motive power, see pages 208 to 212, inclusive. For table of power to operate, see "Engineering Information."

Fig. 40, Standard Sizes, Capacities, Etc.

PLUNGERS		CAPACITY			Max. Working Pressure Pounds	DIAM. OF PIPES		Gear Ratio	*Tight and Loose Pulleys	Cipher
Diam. Inches	Stroke Inches	Gallons per Rev.	Usual Revs. per Min.	Gallons per Min.		Suction Inches	Disch. Inches			
4	6	.98	60	59	100	2½	2	5 to 1	16 x 4	OBCORDATE
4½	6	1.24	60	74	95	3	2½	5 to 1	18 x 4	OBTUSION
5	6	1.53	60	91	90	3	2½	5 to 1	18 x 4	OBJECTOR
5½	6	1.85	60	111	75	3½	3	5 to 1	18 x 4	OBEYING
5½	8	2.46	60	147	85	4	3	5 to 1	20 x 5	OBITUARY
6	8	2.94	55	161	70	4	3	5 to 1	20 x 5	OBFIRM
7	8	4.00	55	220	100	5	4	5 to 1	28 x 6	OBBLATION
8	8	5.22	55	287	100	5	4	5 to 1	30 x 6	OBTUND
8	10	6.52	50	326	90	6	5	5 to 1	30 x 6	OBSEQUENT
9	10	8.26	50	413	85	6	5	5 to 1	30 x 8	OBTRUSIVE
10	10	10.20	45	459	90	8	6	5 to 1	36 x 8	OBEAH
11	12	14.81	42	622	90	10	8	5 to 1	36 x 10	OB1
12	12	17.62	42	740	75	10	8	5 to 1	36 x 10	OB1TUAL
12	14	20.56	40	822	100	12	10	5 to 1	44 x 10	OB1JECT
13	14	24.12	40	965	85	12	10	5 to 1	44 x 10	OB1JECTING
14	14	27.98	40	1119	75	12	10	5 to 1	46 x 10	OB1JECTIVE

*NOTE.—Sizes 10×10 and larger furnished with tight pulley only.

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Deming Single-Acting Triplex Plunger Pump

Fig. 40, for Medium Service

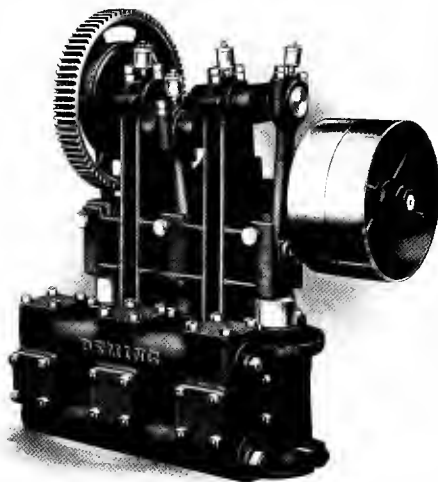


Fig. 40, Sizes 4 x 6 to 5½ x 6

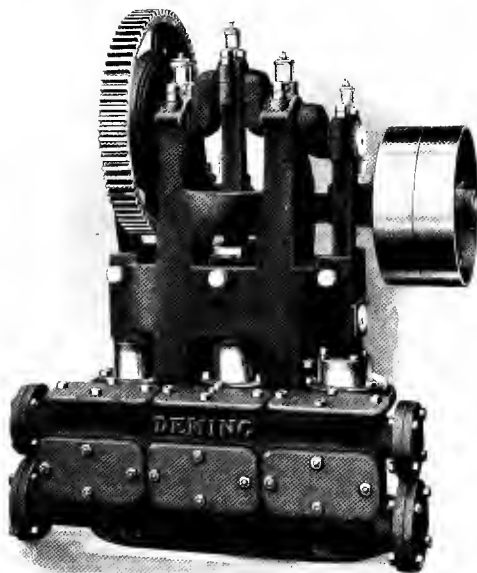


Fig. 40, Sizes 5½ x 8 and 6 x 8



Deming Single-Acting Triplex Plunger Pump

Fig. 40, for Medium Service

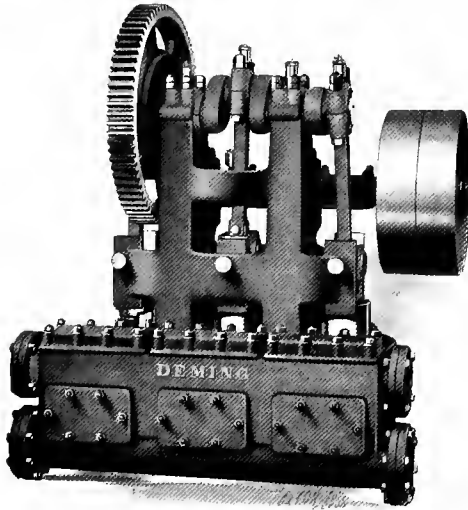


Fig. 40, Sizes 7 x 8 and 8 x 8

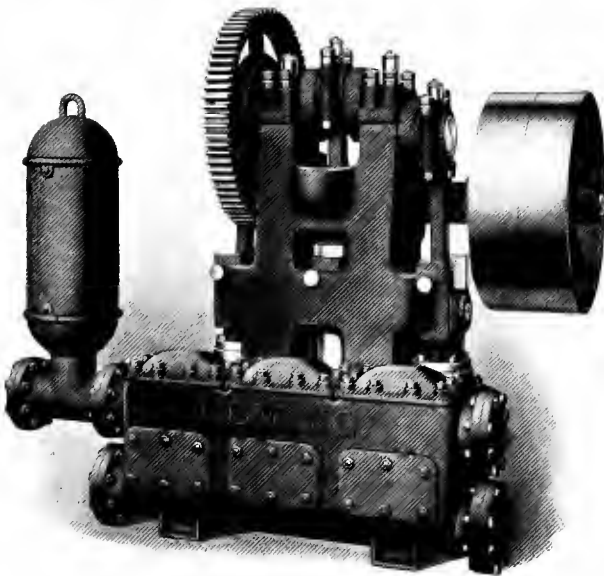


Fig. 40, Sizes 8 x 10 and 9 x 10



Deming Single-Acting Triplex Plunger Pump
Fig. 40, for Medium Service

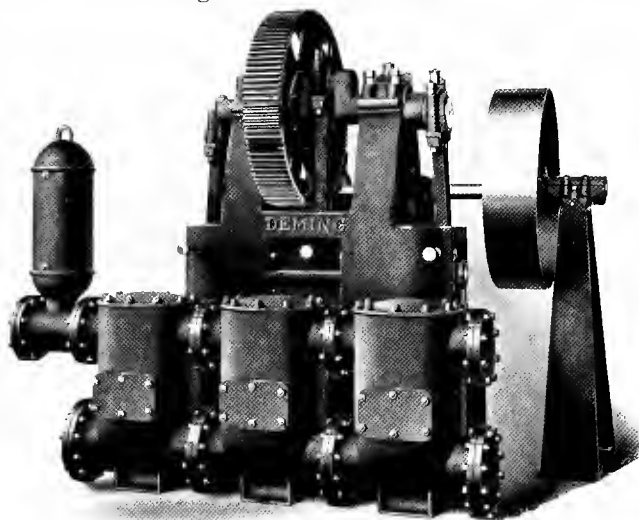


Fig. 40, 11 x 12 and 12 x 12

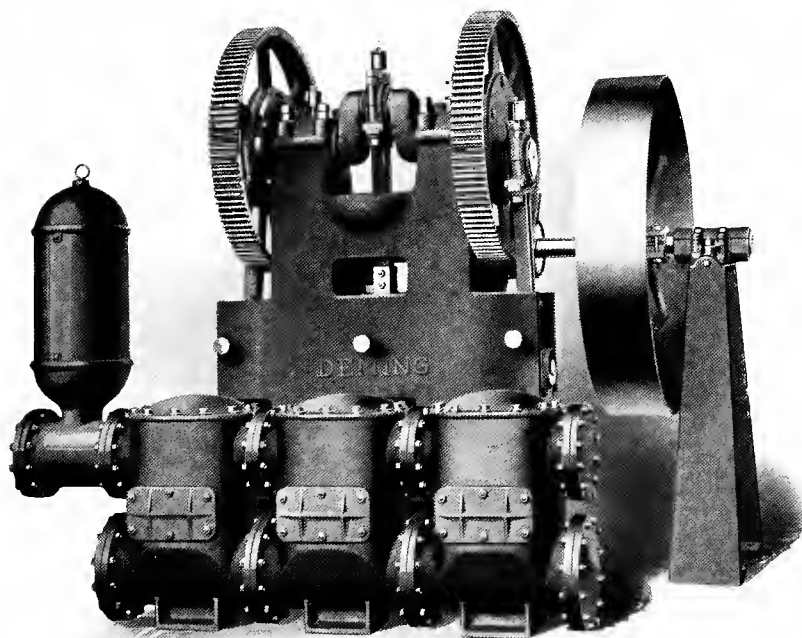


Fig. 40, Sizes 12 x 14 and larger

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Double-Acting Triplex Piston Pump

Fig. 41, for Medium Service

Fig. 41 Double-Acting Triplex Pump is designed for tank pumping in factories, cement mills and paper mills, for brine circulation and general water supply.

Specifications

FRAME consists of two standards, and includes crosshead guides and the main crank shaft bearings, the latter being lined with best anti-friction metal.

CRANK SHAFT is of best open hearth steel in one piece.

GEARING is machine cut, and is double in sizes 12 x 14 and larger.

PINION SHAFT is of steel, running in boxes lined with best anti-friction metal and bolted to main frame. The shaft is also supported by outboard bearing and stand outside of pulley.

CONNECTING RODS are of steel, with marine type boxes at crank end, and with bronze boxes having wedge and screw adjustment at the crosshead end.

CROSSHEADS run in bored guides and have bronze shoes adjustable for wear.

PISTONS are made with followers and are fibrous packed.

PISTON RODS are of steel of the best quality.

CYLINDERS are three separate iron castings, bolted to base, and fitted with removable bronze liners.

VALVE CHAMBERS are three separate castings, each containing two sets of suction and discharge valves, and are bolted to each other and to the cylinders. They are of liberal proportion, affording large valve area and easy access to valves.

VALVES are rubber discs, protected from cylindrically wound springs by brass plates. Seats are of bronze, grid type, screwed into the decks. Bronze or hard rubber valves for hot water furnished when so ordered.

AIR CHAMBER furnished if specified. Vacuum Chamber to order at extra price.

GREASE CUPS, or Oil Cups if specified, and wrenches furnished with all pumps.

SPECIALS: Pumps will be furnished with phosphor bronze pistons, brass cased or bronze piston rods, rawhide pinions, or otherwise varied from standard construction, at extra price.

For different Types of Drive for pumps direct connected with electric motor, gas engine or other motive power, see pages 208 to 212, inclusive.

For table of power to operate, see "Engineering Information."

Fig. 41, Standard Sizes, Capacities, Etc.

PISTONS		CAPACITY			Max. Working Pressure Pounds	DIAM. OF PIPES		Gear Ratio	Pulley	Cipher
Diam. Inches	Stroke Inches	Gallons per Rev.	Usual Revs. per Min.	Gallons per Min.		Suction Inches	Dischg. Inches			
8	10	13.02	45	586	100	10	8	5 to 1	36 x 10	OXBANE
9	10	16.19	45	728	85	10	8	5 to 1	36 x 10	OXCYRATE
10	12	23.85	42	1001	100	10	10	5 to 1	42 x 12	OXTER
11	12	28.85	42	1211	85	12	10	5 to 1	42 x 12	OXIDIZING
12	12	34.75	42	1459	75	12	10	5 to 1	42 x 12	OXIDIZE
12	14	40.40	40	1616	100	12	10	5 to 1	42 x 14	OXBIRD
13	14	47.41	40	1896	85	16	14	5 to 1	42 x 14	OXYGONAL
14	14	55.25	40	2210	75	16	14	5 to 1	42 x 14	OXGANG

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Deming Double-Acting Triplex Piston Pump

Fig. 41, for Medium Service

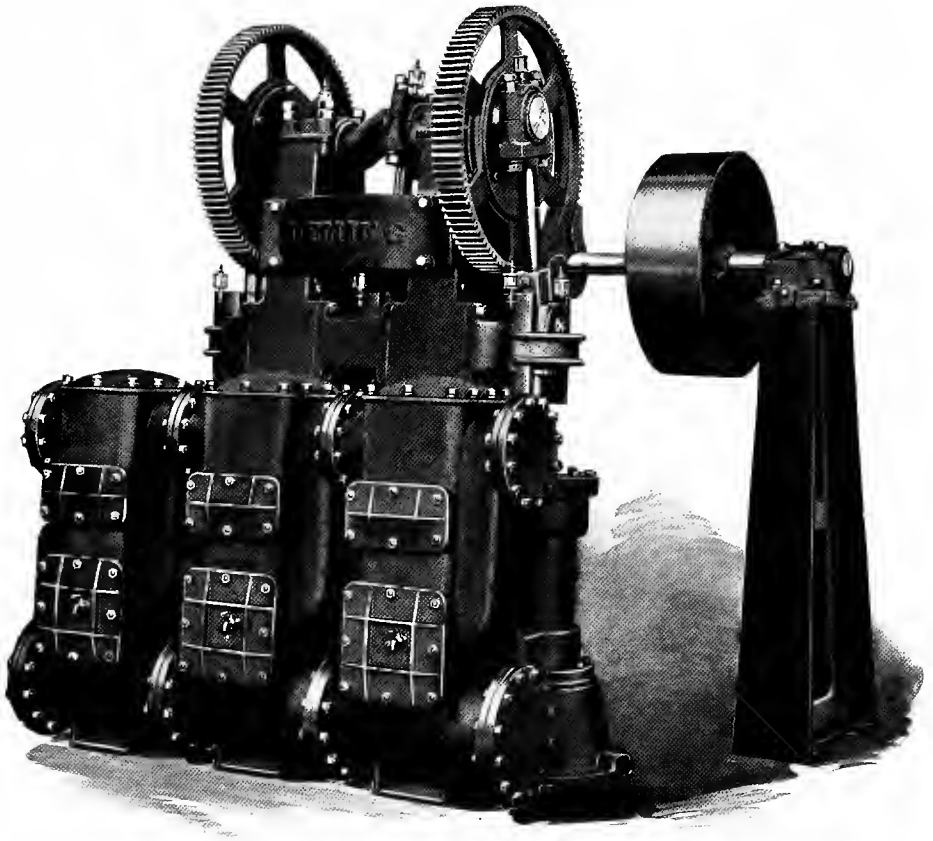


Fig. 41, Sizes 12 x 14 and larger



Deming Single-Acting Triplex Plunger Pump

Fig. 58, for Heavy Service

Fig. 58, Single-Acting Triplex Pump, is designed for working pressures of from 200 to 250 pounds, or equivalent elevation, and is recommended for general water supply, boiler feeding and mine pumping, where pressures do not exceed the ratings given.

FRAME is of the two-standard box type, and includes crosshead guides and main crank shaft bearings, the latter being lined with best anti-friction metal.

CRANK SHAFT is of best open hearth steel casting in one piece.

GEARING is machine cut from the solid. A gear guard covers the pinion and adjacent teeth of the crank gear.

PINION SHAFT is of steel, running in boxes lined with best anti-friction metal.

CONNECTING RODS have bronze boxes with wedge adjustment at crosshead end and marine type babbitted boxes at crank end.

CROSSHEADS run in bored guides and have bronze shoes adjustable for wear.

PLUNGERS are of hard, close-grained cast iron, accurately machined and ground true and smooth.

CYLINDERS are of close-grained cast iron in one piece.

VALVE CHAMBERS are in one casting, separate from and bolted to the cylinders. They are of liberal proportion, with large valve area, and all valves are readily accessible.

VALVES are of special composition rubber on bronze, grid type seats. Bronze valves furnished when specified.

AIR CHAMBER supplied with pump. Vacuum Chamber to order.

GREASE CUPS, or Oil Cups if specified, and wrenches furnished with pumps.

SPECIAL CONSTRUCTION: Pumps furnished with bronze plungers, bronze lined stuffing boxes and glands, rawhide pinions, or otherwise varied from standard construction, at extra price.

For different Types of Drive by electric motor, gas engine, or other motive power, see pages 208 to 212, inclusive. For table of power to operate, see "Engineering Information."

Fig. 58, Standard Sizes, Capacities, etc.

PLUNGERS		CAPACITY				DIAM. OF PIPES		Gear Ratio	Tight and Loose Pulleys	Cipher
Diam. Inches	Stroke Inches	Gallons per Rev.	Usual Revs. per Min.	Gallons per Min.	Maximum Working Pressure Pounds	Suction Inches	Dischg. Inches			
3½	6	.75	50	37.5	250	2½	2	5 to 1	20 x 5	OVERLAY
3½	8	1.00	50	50.0	200	2½	2	5 to 1	24 x 5	OVERLAID
4½	8	1.65	50	82.5	225	3	2½	5 to 1	28 x 6	OVERLADEN
5	8	2.04	50	102.0	200	4	3	5 to 1	28 x 6	OVERLAYING

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Deming Single-Action Triplex Plunger Pump

Fig. 58

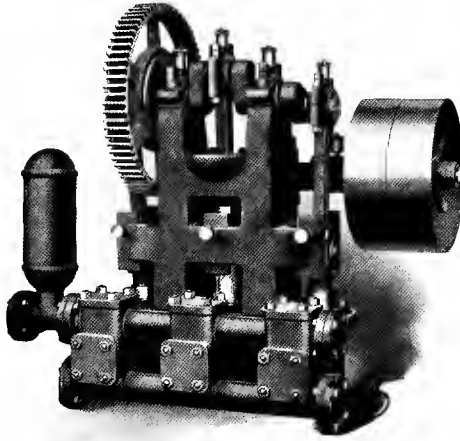


Fig. 58, Size 3 1/2 x 6

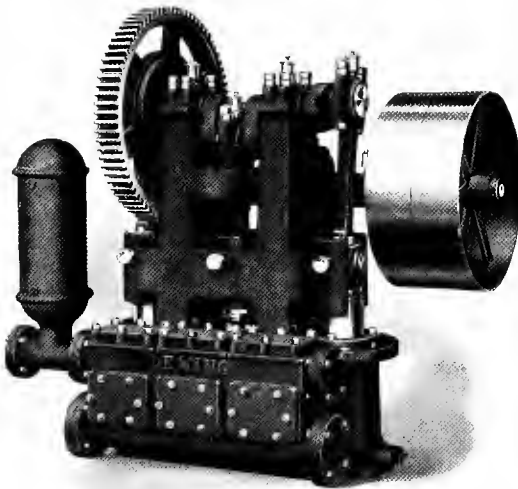


Fig. 58, Size 5 x 8



Deming Single-Acting Triplex Plunger Pump

Fig. 52, for Heavy Duty

Fig. 52 Single-Acting Triplex Pump is designed for working pressures of from 200 to 340 pounds, or equivalent elevations. It is especially adapted for general water supply, boiler feeding, hydraulic elevators and mine pumping, where the pressures do not exceed the ratings given below.

FRAME consists of two standards, and includes crosshead guides and main crank shaft bearings, the latter being lined with best anti-friction metal.

CRANK SHAFT is of best open hearth steel casting in one piece.

GEARING is machine cut, and is double in size 6 x 8 for 300 pounds pressure and larger sizes; smaller sizes made with double gearing at extra price.

PINION SHAFT is of steel, running in boxes lined with best anti-friction metal and bolted to main housings.

CONNECTING RODS have bronze boxes with wedge and screw adjustment at the crosshead end, and marine type babbitted boxes at the crank end.

CROSSHEADS run in bored guides, and have bronze shoes adjustable for wear.

PLUNGERS are of hard close-grained cast iron, finished true and smooth, and reciprocate through deep stuffing boxes.

CYLINDERS and base are in one casting in sizes 8 x 10 and smaller, and in larger sizes are in three separate castings bolted to the base.

VALVE CHAMBERS are separate from and bolted to the cylinders. They are of liberal proportion, affording large valve area, and all valves are readily accessible.

VALVES for 300 pounds pressure or less are of special composition rubber with bronze seats of the grid type, unless specified otherwise. For higher pressure, valves are of bronze.

AIR CHAMBER supplied with pumps. Vacuum Chamber to order.

GREASE CUPS, or Oil Cups if specified, and wrenches furnished with pump.

SPECIAL CONSTRUCTION: Solid bronze plungers, bronze lined stuffing boxes and glands rawhide pinions, or other variations from standard construction, at extra price.

For different Types of Drive for pumps direct connected with electric motor, gas engine, or other motive power, see pages 208 to 212, inclusive.

For table of power to operate, see "Engineering Information."

Fig. 52, Standard Sizes, Capacities, Etc.

PLUNGERS		CAPACITY			DIAM. OF PIPES		Gear Ratio	*Tight and Loose Pulleys	Cipher	
Diam. Inches	Stroke Inches	Gallons per Rev.	Usual Revs. per Min.	Gallons per Min.	Maximum Working Pressure Pounds	Suction Inches				Dischg. Inches
3	6	.55	50	27.5	400	2½	2	5 to 1	24 x 5	OULONG
3½	6	.75	50	37.5	300	2½	2	5 to 1	24 x 5	OUPHE
4	6	.98	50	49.0	230	2½	2	5 to 1	24 x 5	OUPHEN
4	8	1.30	45	58.5	325	3	2½	5 to 1	28 x 6	OURETIC
5	8	2.04	45	91.	200	4	3	5 to 1	28 x 6	OUROLOGY
6	8	2.93	45	131.	250	5	4	5 to 1	30 x 8	OUSEL
6	8	2.93	45	131.	300	5	4	5 to 1	36 x 8	OUST
6½	8	3.44	45	155.	260	5	4	5 to 1	36 x 8	OUTLOOK
7	8	4.00	45	180.	220	5	4	5 to 1	36 x 8	OUSTED
7	10	5.00	42	210.	300	6	5	5 to 1	42 x 10	OUSTING
8	10	6.52	42	273.	220	6	5	5 to 1	42 x 10	OUSTER
8	12	7.83	40	313.	340	8	7	5 to 1	48 x 14	OUTING
9	12	9.91	40	396.	275	8	7	5 to 1	48 x 14	OUTER
10	12	12.24	40	489.	225	8	7	5 to 1	48 x 14	OUTERLY

*Sizes 7 x 10 and larger are furnished with tight pulley only.

Deming Single-Acting Triplex Plunger Pump

Fig. 52. for Heavy Duty

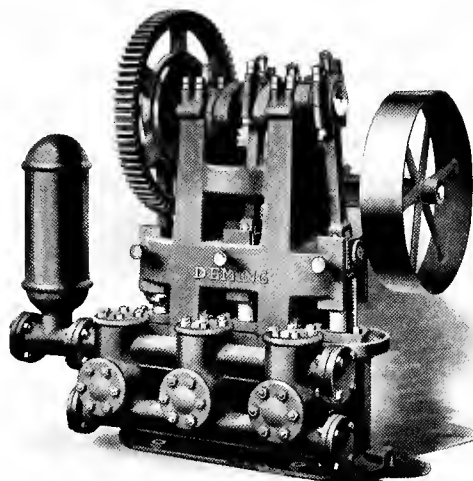


Fig. 52, Size 4 x 8

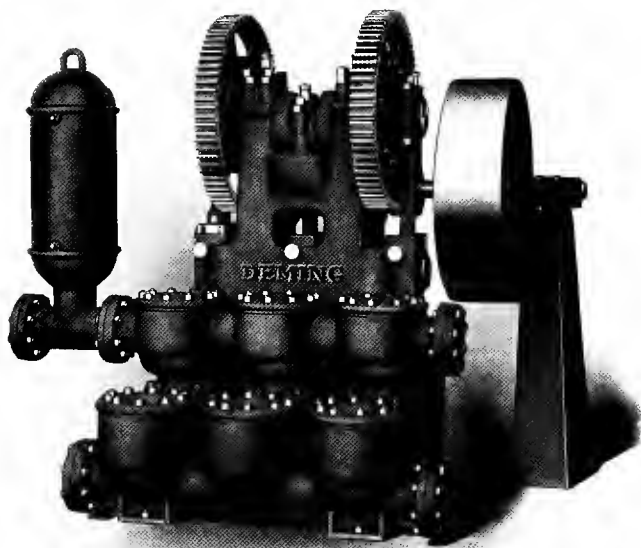


Fig. 52, Sizes 6 x 8 to 7 x 8



Deming Horizontal Triplex Plunger Pumps

With Guarded Gears and Accessible Valves

Figs. 72 and 73

Figs. 72 and 73 Horizontal Single-Acting Triplex Plunger Pumps are the result of twenty years of experience in designing and manufacturing electric pumps for mine service and are recommended for use where conditions are such that the pressure at the pump does not exceed 100 pounds. The design has been made as simple as possible throughout, especial attention being given to accessibility and to the protection of the operator from injury.

Figs. 72 and 73 are the same in construction throughout, except that Fig. 72 is furnished with axles and wheels for tracks, the gauge of which is not less than 32-inches for the 4 x 5 size, 39-inches for the 5 x 6 size and 42-inches for the 5½ x 8 size. The side frames of Fig. 73 are also provided with slots to permit mounting on mine car axles when desired to be used as a portable outfit. These pumps are also furnished, when preferred, with a single reduction of gearing for connecting a *Slow Speed* motor instead of with double reduction of gearing as illustrated. The valve area is large, and yet the design is such that the clearance is reduced to a minimum, making the pump especially desirable for a gathering pump, as it readily frees itself of air.

Specifications

CRANK SHAFT is of best open hearth steel in one piece with flange for gear.

GEARING is machine cut, the motor pinion being of rawhide unless otherwise specified. The Crank Gear is bolted to the crank shaft and can be taken off without removing the shaft from its bearings.

CONNECTING RODS have babbitt lined adjustable boxes at the crank end and bronze bushings at the plunger end.

PLUNGERS are of close grained iron unless otherwise specified, and the cross-heads reciprocate through bored guides.

CYLINDERS AND VALVE CHAMBERS are unusually heavy for mine service and are provided with hand hole covers which give very quick access to valves.

VALVES are of rubber on bronze grid seats which are screwed into decks.

AIR CHAMBER, GREASE CUPS AND WRENCHES are furnished.

SPECIAL CONSTRUCTION: Pumps furnished with bronze, or brass-cased plungers, and bronze-lined stuffing boxes and glands when required.

Fig. 73, Standard Sizes, Capacities, Etc.

PLUNGERS		CAPACITY			Maximum Discharge Pressure Pounds	DIAMETER OF PIPES		Cipher	
Diameter Inches	Stroke Inches	Gallons per Revolution	Usual Revolutions per Minute	Gallons per Minute		Suction Inches	Discharge Inches	Fig. 72	Fig. 73
4	5	.81	62	50	100	3	3	OVATE	OBOLE
5	6	1.53	66	100	100	4	3	OUZEL	OBY
5½	8	2.46	61	150	100	5	4	OTARY	OCHRY

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Deming Horizontal Triplex Plunger Pumps
With Guarded Gears and Accessible Valves

Figs. 72 and 73

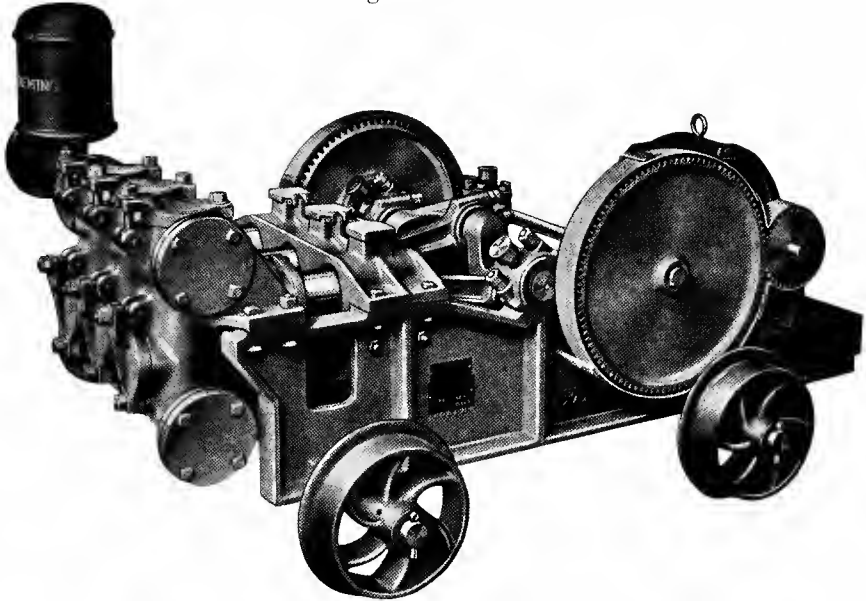


Fig. 72, Deming Portable Horizontal Triplex Plunger Pump

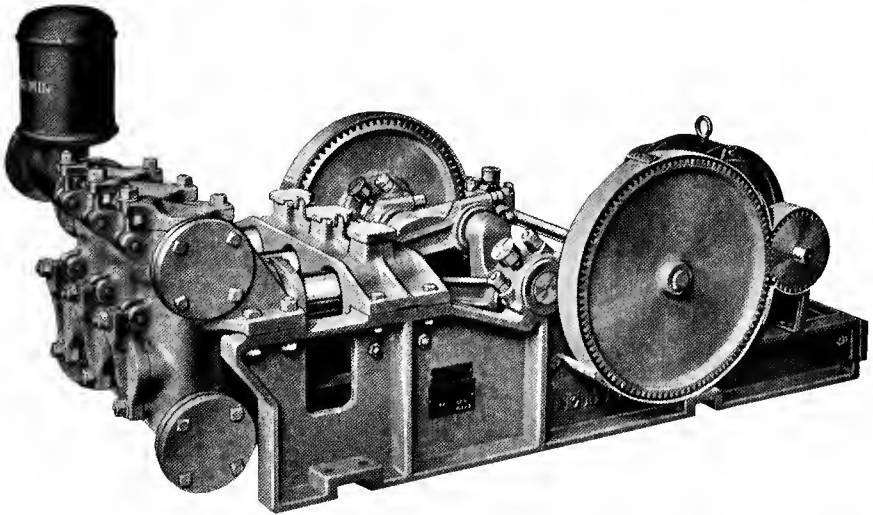


Fig. 73, Deming Stationary Horizontal Triplex Plunger Pump

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Deming Portable Electric Driven Triplex Mine Pump

Fig. 70, for General Service

Fig. 70 Portable Electric Driven Triplex Mine Pump is of the horizontal, single-acting, outside packed and outside guided plunger type, and is especially designed for pumping out mine sumps. It is very compact, requiring a minimum amount of head room, and being mounted on a portable truck, is easily moved from place to place as required. The truck is wholly of iron, and not affected by moisture, thereby insuring permanency of alignment of pump and motor.

The standard construction of the working parts of the pump, including guide columns, crank shaft, gearing, connecting rods, plungers, valve chambers, etc., is the same as for corresponding sizes of our Fig. 50 vertical pump, listed on page 188, and insures promptness in furnishing repair parts, which is so essential in mining operations.

The cylinders are of special design to meet the conditions imposed by the horizontal type.

Standard construction includes iron plungers, glands, cylinders and valve chambers, and iron truck complete with wheels having a 9-inch diameter tread, intermediate gear and rawhide motor pinion for connecting motor, but motor is not included unless so specified.

All gearing is carefully protected by steel guards. Truck wheels of other diameter than 9-inch furnished, when specified. Grease cups, or oil cups if specified, and wrenches furnished with all pumps.

SPECIAL CONSTRUCTION: Brass cased plungers, or solid bronze plungers, and bronze lined stuffing boxes and glands, or entire water end made of bronze, at extra price.

Correspondents should state gauge of track, height of roof, suction lift, discharge elevation and approximate lengths and diameters of pipes, and should also furnish dimensions of motor, if ordering. Pumps can be furnished complete with motor when desired, in which case, the kind of electric current available, and voltage of same, should be mentioned.

For table of power to operate see "Engineering Information."

Fig. 70, Standard Sizes, Capacities, Etc.

PLUNGERS		CAPACITY			Max. Working Pressure Pounds	DIAM. OF PIPES		Gear Ratio	Intermed. Gears	*CIPHER
Diam. Inches	Stroke Inches	Gallons per Rev.	Usual Revs. per Min.	Gals. per Min.		Suction Inches	Dischg. Inches			Standard Fitted
3½	4	.50	60	30	150	2½	2	5 to 1	Special	ORGANISM
4	4	.65	60	39	150	2½	2	5 to 1	Special	ORGANIST
4	6	.98	60	59	160	2½	2	5 to 1	Special	ORDINAL
4½	6	1.24	60	74	150	3	2½	5 to 1	Special	ORBATE
5	6	1.53	60	91	150	3	2½	5 to 1	Special	ORDINANCE
5½	8	2.46	60	147	150	4	3	5 to 1	Special	ORDINATE
6	8	2.94	55	161	140	4	3	5 to 1	Special	ORGASM
7	8	4.00	55	220	150	5	4	5 to 1	Special	ORGINATION
8	8	5.22	55	287	150	5	4	5 to 1	Special	ORGY
8½	8	5.90	55	324	140	6	5	5 to 1	Special	ORDINATOR

*For brass cased plungers and bronze lined stuffing boxes and glands, place cipher word "PACING" immediately following the cipher word for the standard fitted pump.

*For solid bronze plungers and bronze lined stuffing boxes and glands, place the cipher word "PACATION" immediately following the cipher word for the standard fitted pump.

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Deming Portable Electric Triplex Mine Pump

Fig. 70, for General Service

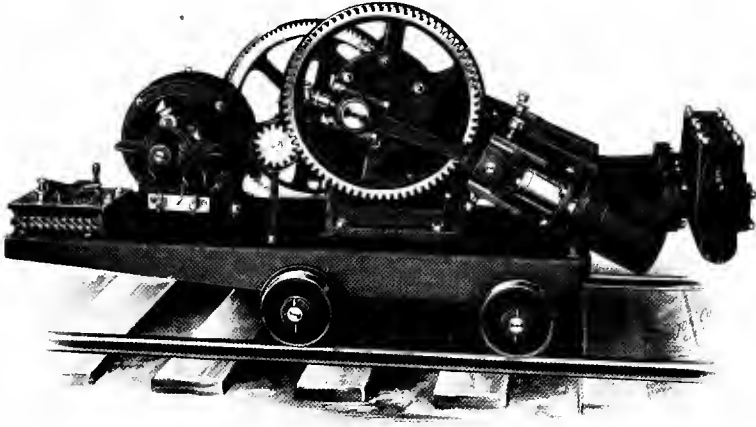


Fig. 70, Sizes 5 x 6 and smaller

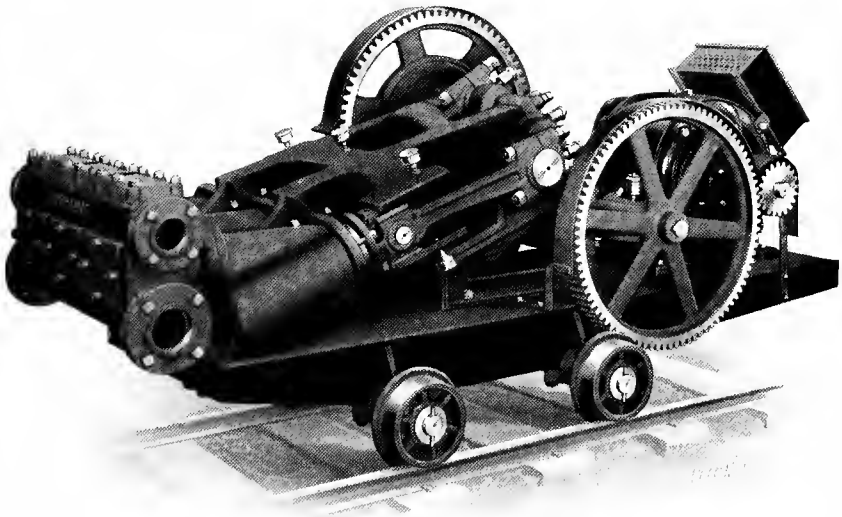


Fig. 70, Sizes 5½ x 8 and larger



Deming Single-Acting Triplex Plunger Pump

Fig. 48

Especially designed for pumping into open or compression tanks in apartment houses, residences, office buildings, or wherever quietness of operation is essential. These pumps have unusually large valve area, which permits operating at much higher speeds than is the usual practice with geared pumps, resulting in much greater capacity for the space occupied.

FRAME consists of three standards, which include the crosshead guides and the main crank shaft bearings, the latter being lined with best anti-friction metal.

CRANK SHAFT is of best open hearth steel in one piece, and extended to receive driving pulley.

CONNECTING RODS, in sizes 4 x 6 and larger, have bronze boxes with wedge and screw adjustment at the crosshead ends, and marine type babbitted boxes at the crank end. Smaller sizes have bronze bushings at crosshead end.

CROSSHEADS run in bored guides, and sizes 4 x 6 and larger have bronze shoes adjustable for wear.

PLUNGERS are of close grained cast iron, finished true and smooth, and reciprocate through packing of ample depth.

CYLINDERS in sizes 5 x 6 and smaller are integral with the main guide frame.

VALVE CHAMBERS in sizes 3½ x 4 and larger are separate castings bolted to the cylinders. All valves are readily accessible.

VALVES for cold water are rubber discs protected on top from cylindrically wound springs by brass plates. Bronze or hard rubber valves furnished for hot water when specified.

VALVE SEATS are of bronze, and in sizes 2 x 2 and larger are of grid type, screwed into the decks.

GREASE CUPS, or Oil Cups if preferred, and wrenches furnished with all pumps, also air chamber if specified. Vacuum Chamber to order at extra price.

SPECIALS: Pumps furnished with brass cased plungers, or solid bronze plungers, and bronze lined stuffing boxes and glands at extra price.

For different Types of Drive for Fig. 48 pumps in connection with electric motor and gas engine, see pages 208 to 212, inclusive.

For table of power to operate, see "Engineering Information."

Fig. 48, Standard Sizes, Capacities, Etc.

PLUNGERS		CAPACITY			Maximum Working Pressure Pounds	DIAM. OF PIPES		*Pulley	Cipher
Diam. Inches	Stroke Inches	Gallons per Rev.	Usual Revs. per Min.	Gallons per Min.		Suction Inches	Discharge Inches		
1½	1½	.034	140	4.8	100	1¼	1	16 x 3	OXPECK
2	2	.081	120	9.7	100	2	1½	24 x 3	OXALITE
2½	2	.127	120	15.2	100	2	1½	30 x 3	OXAMIDE
2½	3	.191	110	21.0	100	2½	2	36 x 3	OXIDATE
3	3	.275	110	30.2	100	2½	2	42 x 3	OXIDATION
3½	3	.375	110	41.2	100	2½	2	48 x 3	OXIDATOR
3½	4	.499	95	47.4	100	3	2½	42 x 4	OXIODIC
4	4	.65	95	61.7	100	3	2½	48 x 4	OXONIAN
4	6	.98	85	83.3	100	3½	3	48 x 5	OXEN
4½	6	1.24	85	105.4	100	3½	3	48 x 5	OXBOW
5	6	1.53	85	130.0	100	3½	3	48 x 6	OXEVED
5½	8	2.46	75	184.5	100	5	4	54 x 8	OXPTH
6	8	2.94	75	220.5	100	5	4	60 x 8	OXYTONE
7	8	4.00	75	300.0	100	6	5	60 x 10	OXIDABLE

*Pumps regularly furnished with tight pulley only; loose pulley at extra price.

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Deming Single-Acting Triplex Plunger Pump

Fig. 48



Fig. 48, Sizes 2 x 2 to 3½ x 3

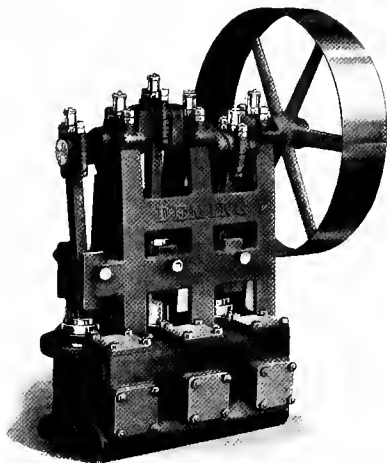


Fig. 48, Sizes 3½ x 4 to 5 x 6

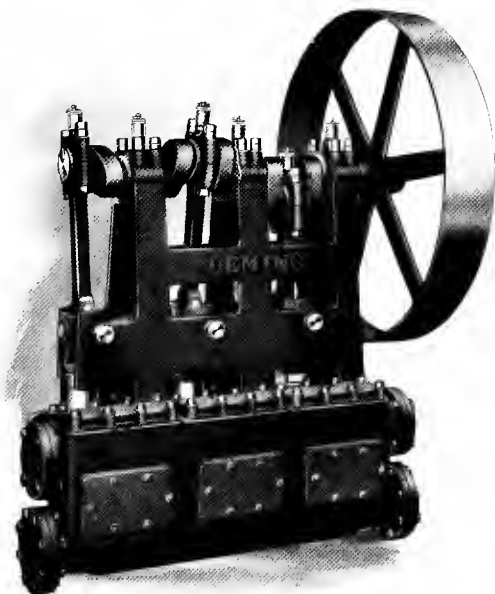
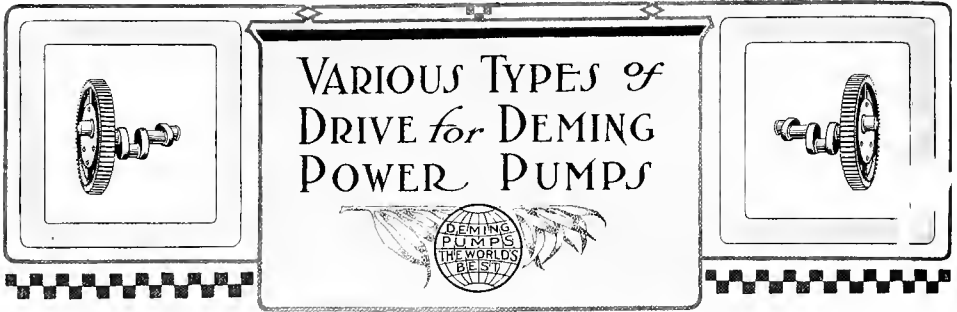


Fig. 48, Sizes 5½ x 8 and larger



On the following four pages are illustrated a few only of the various methods of direct connecting electric motors and gas engines with Deming Power Pumps. While these and other types of drive are much more completely described and illustrated in our special power pump catalogue, those most generally used are shown here, and it is believed that these illustrations together with the descriptions below will assist any purchaser greatly in determining on the type of drive best adapted to his needs.

Type "B" Drive (Cipher, "TYPEB") consists of connecting an electric motor to the pump by intermediate gear and rawhide motor pinion, with both pump and motor mounted on cast iron bed plate, except in the large sizes, which have separate motor bed plate bolted to pump base. We recommend this drive where space for installation is limited and some noise is not objectionable.

Type "C" Drive (Cipher, "TYPEC") consists of cast iron bed plate under both pump and motor, with connection by short belt running over idler having spring tension. This type has the desirable feature of quiet running in addition to its compact arrangement. When the pump is furnished with rawhide pinion practically all noise is eliminated. We recommend this type of drive for tank pumping in residences, apartment houses, hotels, or wherever noise is objectionable.

Type "D" Drive (Cipher, "TYPE D") consists of a silent chain connection between pump and electric motor, with chain gears of proper ratio to obtain desired speed for pump, and with pump and motor mounted on a substantial cast iron bed plate. This is especially recommended where quiet running is essential and space for installation is limited. It is positive and efficient, and is not affected by heat or dampness.

Type "K" Drive (Cipher, "TYPEK") consists of friction cut-off coupling connection between triplex or other geared power pump and steam, gas or gasoline engine, both being bolted to a concrete or other substantial foundation, no bed plate being supplied. This makes a very desirable drive, as, by disengaging the clutch, it permits the operation of other machinery without running the pump.

Type "L" Drive (Cipher, "TYPEL") is not illustrated but is identical with Type "M," except that it is for connecting horizontal instead of vertical gas and gasoline engines. As in Type "M" it includes bed plate under pump and engine, and friction coupling connection.

Type "M" Drive (Cipher, "TYPEM") consists of friction cut-off coupling connection between triplex or other geared power pump and vertical gas or gasoline engine only, both being mounted on heavy cast iron bed plate. This makes a very compact arrangement, the whole forming a self-contained unit requiring much less foundation than when the bed plate is omitted. By disengaging the clutch the engine can be started before starting the pump, and is also available for running other machinery without operating the pump. It is especially adapted to suburban home water supply, small water works systems and railway tank service.

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Type "B" Drive for Deming Geared Power Pumps

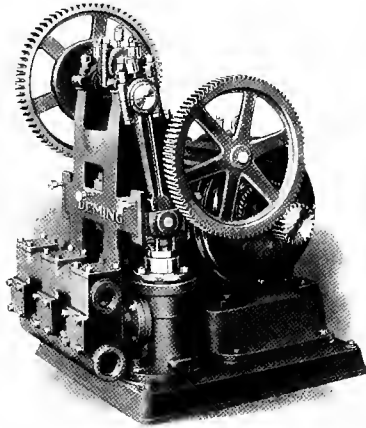


Fig. 50, Sizes 4 x 6 to 5 x 6 with Type "B" Drive

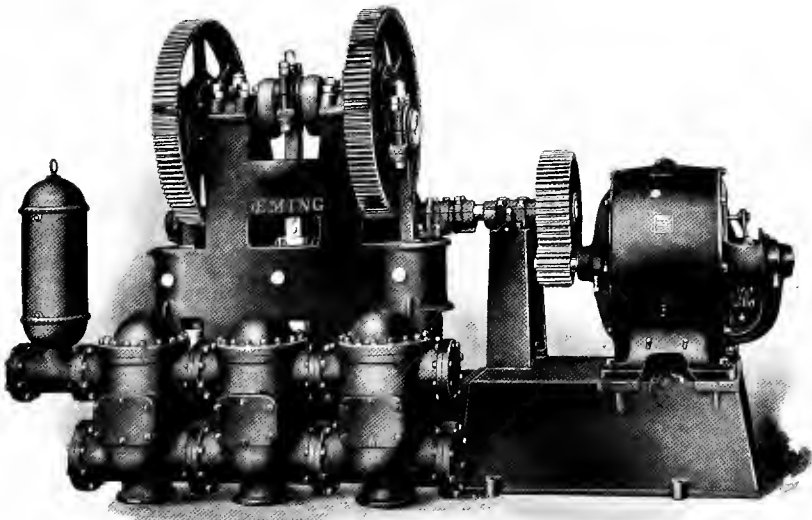


Fig. 50, Sizes 9 x 10 and larger with Type "B" Drive



Type "C" Drive for Deming Geared Power Pumps

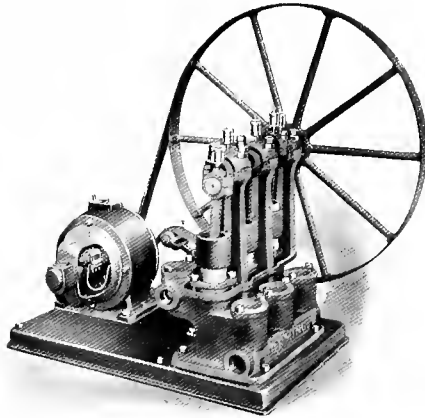


Fig. 48. Sizes 2 x 2 to 3 1/2 x 3 with Type "C" Drive

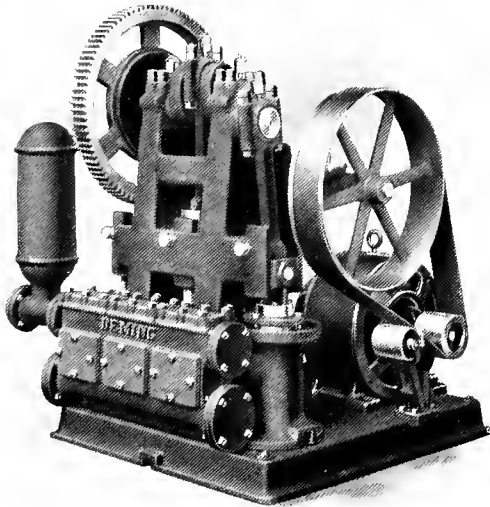


Fig. 50. Size 5 1/2 x 8 with Type "C" Drive

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Type "D" Drive for Deming Geared Power Pumps

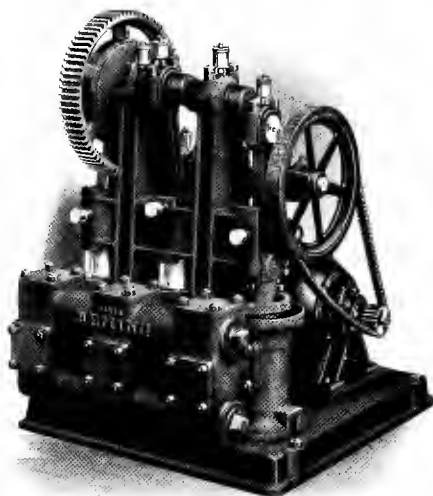


Fig.40, Sizes 4 x 6 to 5½ x 6 with Type "D" Drive

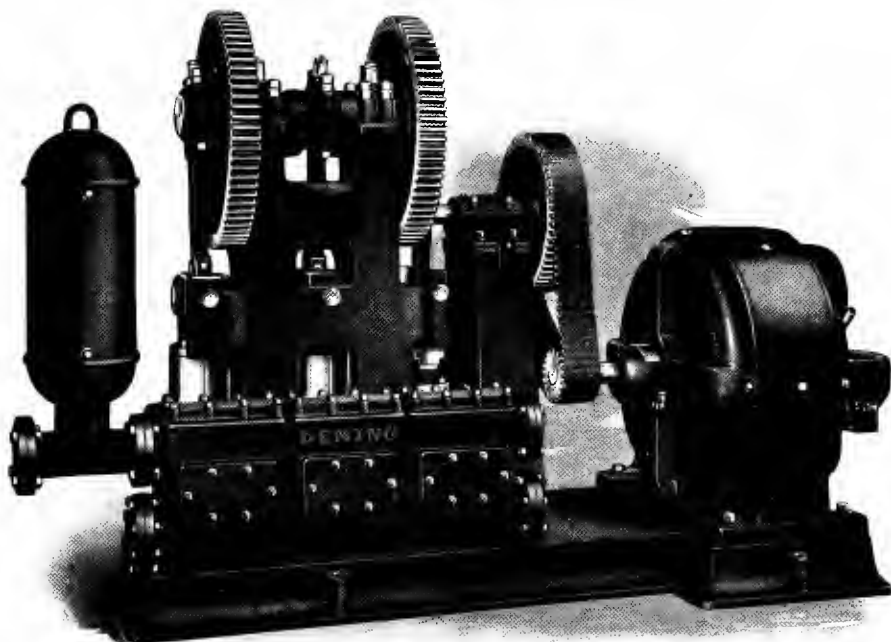


Fig. 50, Size 8 x 8, Double Geared, with Type "D" Drive

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Type "K" Drive for Deming Geared Power Pumps

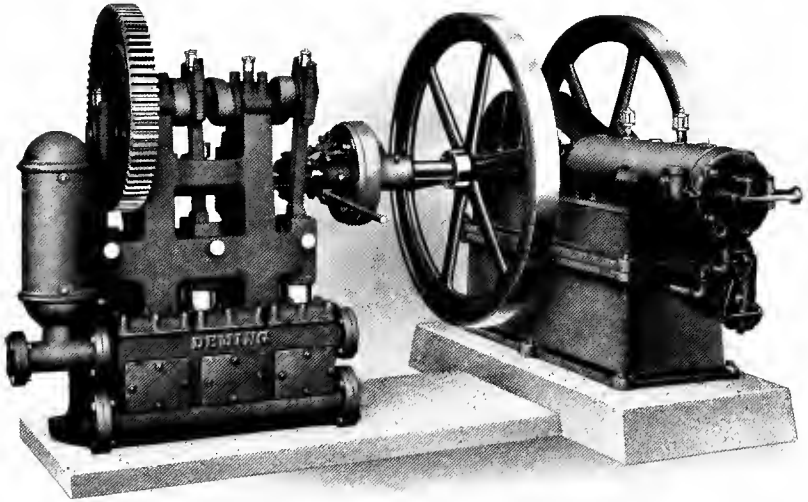


Fig. 50, Sizes $5\frac{1}{2} \times 8$ to $8\frac{1}{2} \times 8$ with Type "K" Drive

Type "M" Drive for Deming Geared Power Pumps

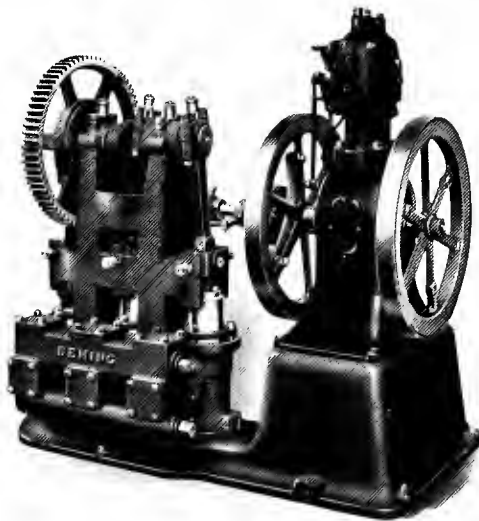


Fig. 50, Sizes 4×6 to 5×6 with Type "M" Drive



HORIZONTAL DOUBLE-ACTING POWER PUMPS

FOR

VARIOUS DUTIES

DOUBLE-ACTING POWER PUMPS
OPERATED FROM ANY POWER
SOURCE FOR MINE PUMPING,
CONTRACTORS' USE, WATER
TANK SERVICE IN FACTORIES
AND MILLS, PNEUMATIC TANK
SERVICE, ETC.





Deming "Atlas" Double-Acting Power Pump

For Wells and Cisterns 25 Feet Deep or Less

Fig. 691

The "Atlas" pump, Fig. 691, is especially designed for use with hydro-pneumatic water systems. Fig. 691 is also well adapted for open tank supply and for pumping water for any service where the pressure does not exceed 75 pounds. FOR ILLUSTRATIONS SHOWING THE "ATLAS" PUMP WITH AIR COMPRESSOR, WITH VARIOUS TYPES OF DRIVES, ALSO FOR FURTHER DESCRIPTION, SEE THE HYDRO-PNEUMATIC SECTION, PAGES 262 TO 273.

Specifications

CYLINDER: Brass lined. Cast in one piece with base.

GEARING: Machine cut and fully guarded. Ratio 5 to 1.

BEARINGS: Babbitt lined and provided with large oil pockets.

PISTON: Furnished with cup packing.

PISTON ROD: Drawn brass.

CROSSHEAD: Guided by two rigid steel guide rods.

VALVES: All valves are easily accessible without disturbing pipe connections.

AIR CHARGING: Size 2 1/4 in. x 5 in. is furnished REGULARLY with air snifter. See illustration at top of opposite page.

A SPECIAL AIR COMPRESSOR will be supplied (see illustration at bottom of opposite page) when desired, at extra price, as listed below.

Type "B" Drive (Cipher, "TYPEB"). Includes cast iron sub-base, intermediate gear and rawhide pinion for connecting electric motor.

Type "C" Drive (Cipher, "TYPEC"). Same as Type "CI" Drive with addition of cast iron sub-base under pump and motor. Belt is included. Motor furnished at extra price.

Type "CI" Drive (Cipher, "TYPECI"). Includes tight pulley, 20 inches diameter or smaller, with belt tightener of gravity type for driving by electric motor or gas engine with short belt pulley centers. Larger diameter pulley supplied at extra price. Belt is not included.

Type "G" Drive (Cipher, "TYPEG"). Includes a horizontal or vertical water-cooled, or a vertical air-cooled, gasoline engine mounted on a cast iron sub-base with pump and connected by gearing. See below for prices of outfits with different styles of engines.

HAND OPERATION: Size 2 1/4 x 5 is furnished, when desired, with lever, link and attachments as illustrated, for operating by hand in case of emergency. (Cipher, "HANDOP.")

Capacities, Sizes, Prices, Etc.

PISTONS		Revs. per Minute	Gallons per Min. at Maximum Speed	Maximum Working Pressure Pounds	DIAMETER OF PIPES		Tight and Loose Pulleys	*Cipher	PRICES		
Diam. Inches	Stroke Inches				Suction Inches	Discharge Inches			With Standard Pulleys	Extra for Hand Operating Attachments	Extra for Air Compressor
2 1/4	5	60	9.6	75	1 1/4	1	8 x 2 1/2	FLAUNT	\$40.00	\$4.00	\$10.00
3	6	55	19.2	75	2	1 1/2	14 x 3	FLAG	70.00	.....	12.00
4	8	50	42.5	75	2 1/2	2	16 x 4	FLAGGING	95.00	.....	15.00

PISTONS		PRICES CONTINUED								
Diam. Inches	Stroke Inches	MOTOR OR ENGINE NOT INCLUDED			WITH "G" DRIVE -- ENGINE INCLUDED					
		With "B" Drive	With "C" Drive	With "CI" Drive	Horizontal Engine Water-cooled		Vertical Engine Water-cooled		Vertical Engine Air-cooled	
					H. P.	Price	H. P.	Price	H. P.	Price
2 1/4	5	\$ 75.00	\$ 70.00	\$ 45.00	1 1/2	\$175.00	1 1/2	\$175.00	1 1/2	\$190.00
3	6	110.00	105.00	78.00	2 1/2	260.00	3	255.00	2 1/2	280.00
4	8	145.00	140.00	105.00	4	375.00	4	335.00	3 1/2	360.00

*When telegraphing with reference to either of the types of drive, place the cipher word representing the type of drive immediately following the cipher word for the standard pump.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Atlas" Double-Acting Power Piston Pump
For Hydro-Pneumatic Water Systems

Fig. 691

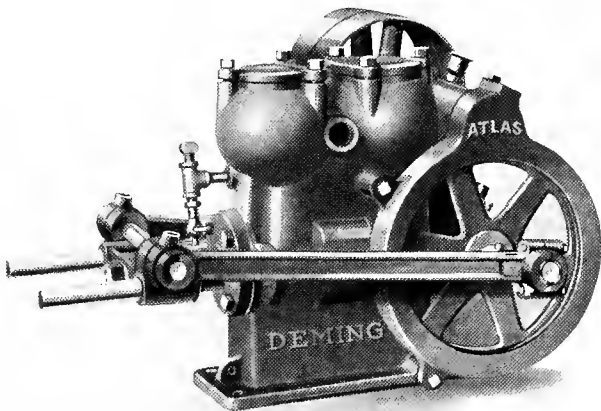


Fig. 691, with Tight and Loose Pulleys, also Air Charging Device

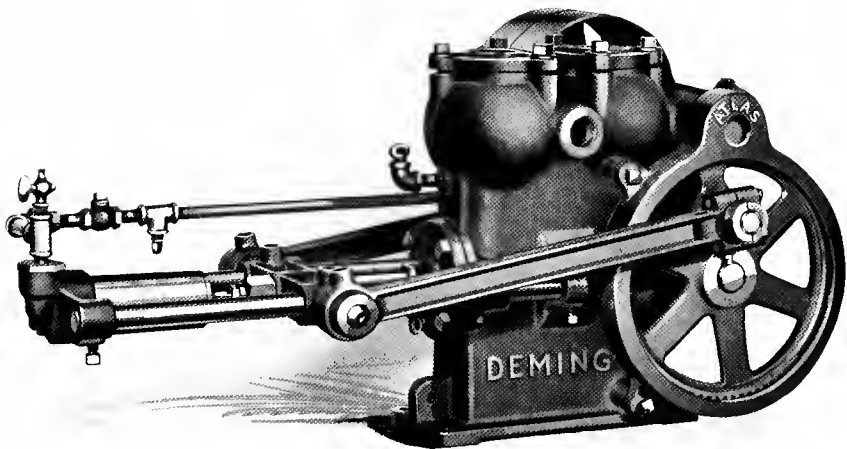


Fig. 691, with Air Compressor

IN THE HYDRO-PNEUMATIC SECTION ON PAGES 262 TO 273, THE "ATLAS" PUMP AND ITS USES IS MORE COMPLETELY DESCRIBED AND ILLUSTRATED.

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming "Triumph" Double-Acting Piston Pump

Fig. 609, for Medium Service

Fig. 609 "TRIUMPH" Piston Pump is adapted to tank supply, brine circulation, sump pumping in mines, and other service where pressures do not exceed those listed below.

The pump cylinder is securely bolted to a substantial bed plate, and the crank shaft, rod guide, yoke and pitman are so arranged as to keep all parts in perfect alignment. All standard pumps have piston with hydraulic cup packing, tight and loose pulleys, cut gearing and babbitted bearings. The piston rod, stuffing box, valves and valve seats are made of brass, and cylinders are brass lined except in "bronze cylinder" and "all bronze" pumps.

Modification of standard construction to suit special requirements can be made at extra price.

Fig. 609 with Type "B" Drive (Cipher, "TYPEB") is the standard pump without pulleys, but with sub-base and gearing connection for electric motor, as illustrated on following page. The MOTOR SPEED should not exceed 1,200 revolutions per minute.

Fig. 609, Sizes, Capacities, Etc.

PISTONS		CAPACITY			Maximum Working Pressure Pounds	DIAM. OF PIPES		Gear Ratio	Tight and Loose Pulleys
Diam. Inches	Stroke Inches	Gallons per Rev.	Usual Revs. per Min.	Gallons per Min.		Suction Inches	Dis-charge Inches		
2½	4½	.19	40	7.6	100	1¼	1¼	5 to 1	16 x 4
3	4½	.27	40	10.8	86	1½	1¼	5 to 1	16 x 4
4	4½	.48	40	19.2	65	2	1½	5 to 1	16 x 4
5	4½	.76	40	30.4	50	2½	2	5 to 1	16 x 4

List Prices of Standard Pump

PISTONS		BRASS LINED		*BRONZE CYL. AND PISTON		*ALL BRONZE		†Extra for Type "B" Drive
Diam. Inches	Stroke Inches	Cipher	Price	Cipher	Price	Cipher	Price	
2½	4½	FATE	\$90.00	FATHERLY	\$120.00	FATLING	\$135.00	\$50.00
3	4½	FATAL	95.00	FATHOM	125.00	FATNER	145.00	50.00
4	4½	FATALITY	100.00	FATIGUE	135.00	FATNESS	160.00	55.00
5	4½	FATEFUL	120.00	FATTY	160.00	FATLY	190.00	55.00

*Pumps with "Bronze Cylinder and Piston" also have bronze valve decks, while "All Bronze" pumps have parts which come in contact with the water made of bronze.

†When telegraphing with reference to Type "B" Drive, place cipher word "TYPEB" immediately following the cipher word for the standard pump.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Triumph" Double-Acting Piston Pump
Fig. 609, for Medium Service

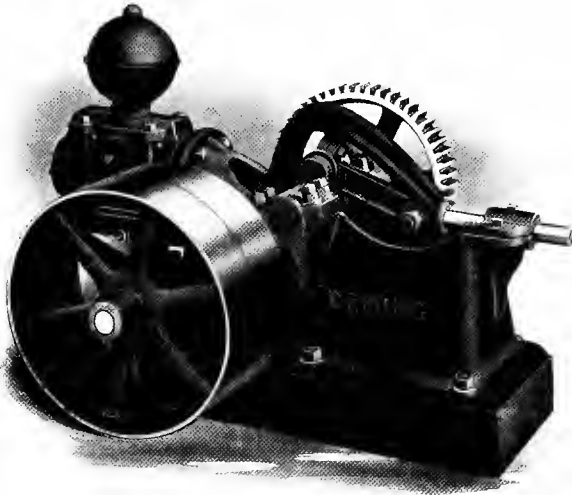


Fig. 609, All Sizes

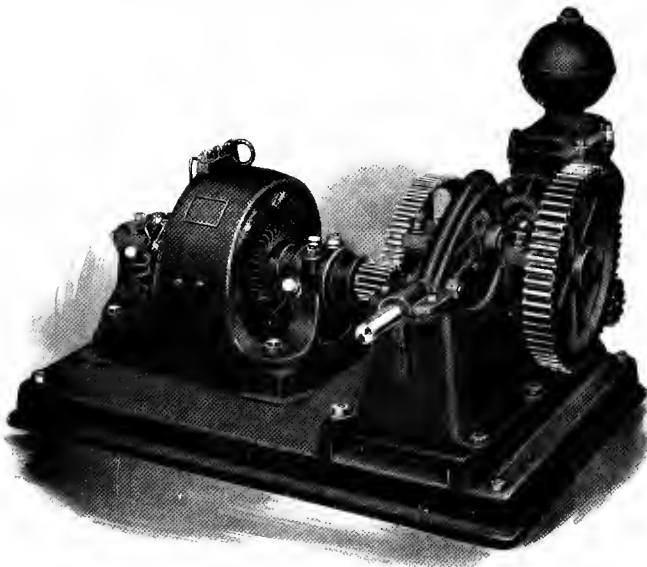


Fig. 609, with Type "B" Drive



Deming Horizontal Double-Acting Piston Pump

Fig. 604, for General Service

Fig. 604 Horizontal Double-Acting Pump is adapted to feeding boilers, tank service, irrigation and general water supply.

The standard construction includes machine cut gears, tight and loose pulleys, babbitted bearings, oil cups, bronze piston rod, fibrous packed pistons and cylinders provided with removable brass liners.

Crosshead runs in bored guide. Valve seats, stems and springs are of brass, and valves are of rubber unless otherwise specified, and are accessible without disturbing pipe connections.

As a general service pump Fig. 604 cannot be excelled for the price.

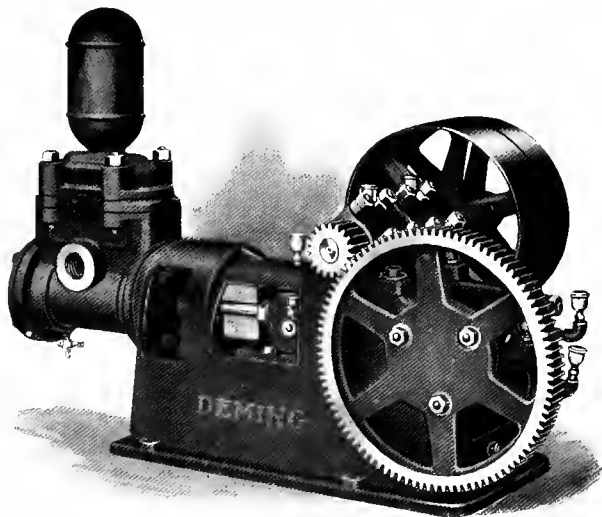


Fig. 604, Sizes 3 x 4½ and 4 x 4½

Fig. 604 with Type "B" Drive (Cipher, "TYPEB") is a modification of the standard pump, being furnished with gearing connection for electric motor, and sub-base extending under both pump and motor.

Fig. 604 with Type "BA" Drive (Cipher, "TYPEBA") consists of the standard pump with gearing connection for electric motor, and with the main frame altered to permit of mounting the motor on top of the pump, thereby economizing floor space. The 6-inch stroke pumps only are adapted to connecting motor with Type "BA" Drive.

Fig. 604, Sizes, Capacities, Etc.

PISTONS		Capacity per Revolution, Gals.	Revolutions per Minute	Capacity per Minute at Maximum Speed Gallons	Limit of Working Pressure Pounds	DIAM. OF PIPES		Gear Ratio	Tight and Loose Pulleys
Diam. Inches	Stroke Inches					Suction Inches	Discharge Inches		
3	4½	.263	40 to 50	13.15	140	1½	1½	5 to 1	14 x 3
4	4½	.479	40 to 50	23.95	120	1½	1½	5 to 1	16 x 3
5	6	.988	35 to 45	44.46	140	2½	2	5 to 1	20 x 5
6	6	1.436	35 to 45	64.62	120	3½	3	5 to 1	24 x 5

PISTONS		BRONZE-LINED CYLINDER		*BRONZE CYLINDER		*ALL BRONZE		†Extra List Prices for Connecting Electric Motors	
Diam. Inches	Stroke Inches	Cipher	Price	Cipher	Price	Cipher	Price	Extra for Type "B" Drive	Extra for Type "BA" Drive
3	4½	FIXABLE	\$100.00	FODIENT	\$140.00	FOGGING	\$165.00	\$50.00	.....
4	4½	FIXATION	110.00	FOEMAN	155.00	FOGGY	180.00	50.00	.....
5	6	FIXEDLY	220.00	FOG	350.00	FOGGAGE	425.00	70.00	\$60.00
6	6	FIXITY	240.00	FOGGED	380.00	FOGGILY	460.00	70.00	60.00

*Pumps with "Bronze Cylinder" also have bronze valve decks and stuffing box gland, while "All Bronze" pumps have all parts which come in contact with the water made of bronze.

†When telegraphing with reference to Type "B" or "BA" Drive, place cipher word "TYPEB" or "TYPEBA," respectively, immediately following the cipher word for the standard belt-driven pump.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Horizontal Double-Acting Piston Pump
Fig. 604, with Types "B" and "BA" Drives

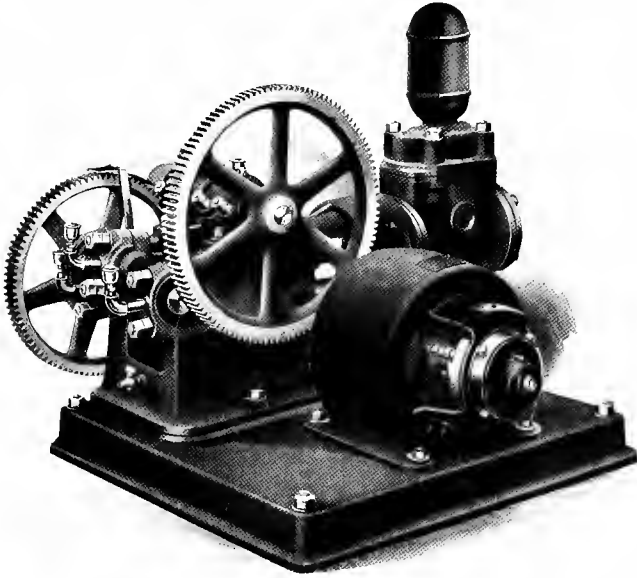


Fig. 604, Size 4 x 4½ with Type "B" Drive

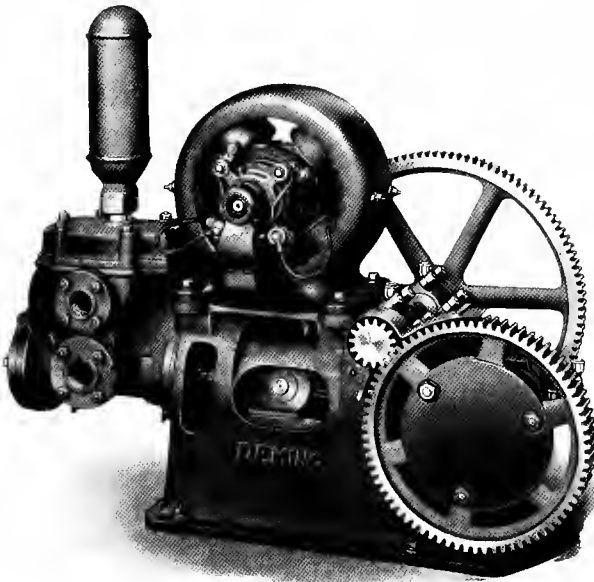


Fig. 604, Size 6 x 6 with Type "BA" Drive

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Double-Acting Power Pump
 With Attachment for Pumping Air
 Fig. 708

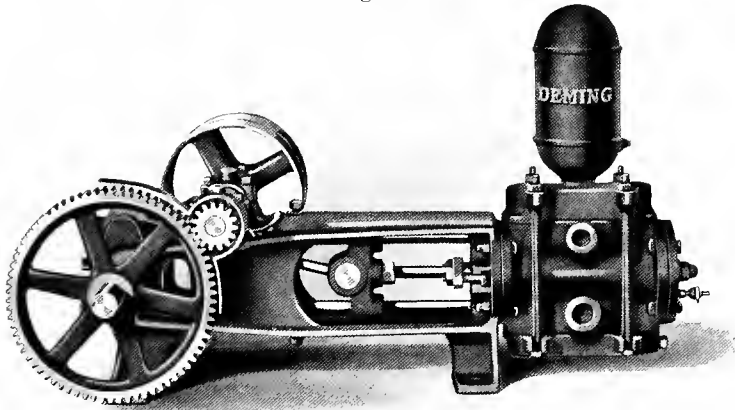


Fig. 708 is a double-acting power pump, made in three sizes, and good for pumping against pressures up to 200 pounds, which makes it an admirable pump for hydro-pneumatic water supply systems.

It is adapted for a suction lift of 24 feet or less.

Any available power may be used to drive the pump, such as gasoline engine, electric motor, etc. Air chamber has ample capacity.

There are no air pockets in this pump so it cannot become "air bound."

CYLINDER is reversible, so suction and discharge pipes may be arranged for either side.

CYLINDER LINER: Brass and removable.

PISTON PACKING: Special fibrous cup packing.

SUCTION VALVE DECK is removable, to give access to suction valves.

GEARS: Ratio 5 to 1. Machine-cut from the solid; not cast teeth.

PULLEYS: See list below.

VALVES: Brass balls; are accessible without interference with the piping.

VALVE SEATS are cast bronze, and removable.

PISTON ROD: Cannot buckle or get out of line as it is double rod guided.

Type "B" is used to indicate direct connected motor drive.

Type "CI" Drive: Includes tight pulley, as follows: No. 1, 8 x 4; No. 2, 16 x 4;

No. 3, 16 x 4. With belt tightener of the gravity type. Pulleys of different diameters furnished at extra price.

Dimensions

No.	Height Inches	Length Inches	Width Inches
1	25	36	15
2	33	40	18
3	33	40	18

Capacities, Sizes, Prices, Etc.

PISTON		Rev- olutions per Minute	Capac- ity per Minute at Max- imum Speed	Maxi- mum Work- ing Pres- sure in Pounds	DIAMETER OF PIPES		Gear Ratio	Tight and Loose Pulley	Wgt.	PRICE			*Cipher
Diam. Inches	Stroke Inches				Suc- tion Inches	Dis- charge Inches				With "CI" Drive	Extra for Type "B" Drive		
2	5	60	8.16	200	1	3/4	5 to 1	8 x 4	150	\$ 60.00	\$ 62.00	\$50.00	FRIEZE
2 1/2	5	60	12.78	200	1 1/4	1	5 to 1	16 x 4	230	90.00	93.00	60.00	FRIEZER
3	5	60	18.36	200	1 1/2	1 1/4	5 to 1	16 x 4	250	110.00	114.00	65.00	FRIEZED

*In telegraphing, if motor drive is wanted, add "TYPEB" to cipher word. If "CI" drive is desired, add "TYPECI" to cipher word.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Horizontal Double-Acting Piston Pump

Fig. 693, for Medium Service

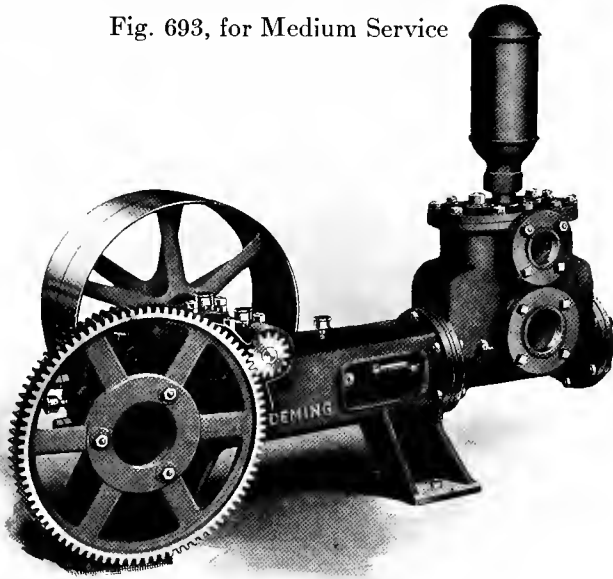


Fig. 693, Size 6 x 10

Fig. 693 Horizontal Double-Acting Piston Pump is designed to meet the demand for a medium priced yet thoroughly reliable power pump, and is adapted for general water supply, irrigation, tank pumping and brine circulation. It is especially recommended on account of the accessibility of the valves and other working parts, and its substantial construction.

MAIN FRAME includes the bored crosshead guide and the shaft bearings, the latter being lined with the best babbit metal.

CYLINDER is of cast iron, bolted to the main frame, and has heavy brass liner.

GEARING is machine cut, the main gear being bolted to a large flange integral with the crank shaft, no key being used.

CONNECTING ROD has babbitted marine type box at the crank end and brass bushing at the crosshead end.

CROSSHEAD is fitted with adjustable bronze shoes and reciprocates through the bored guide.

PISTON is fibrous packed, and piston rod is of bronze working through deep stuffing box with bolted gland.

VALVES are of rubber on bronze seats, and are all very easily accessible from the top without disturbing pipe connections.

STANDARD CONSTRUCTION includes tight and loose pulleys, grease cups and wrenches. Modifications of standard construction to suit special conditions at extra price.

Fig. 693, Sizes, Capacities, Etc.

PISTONS		Capacity per Revolution, Gals.	Revs. per Minute	Capacity per minute at Maximum Speed Gallons	Maximum Working Pressure Pounds	DIAMETER OF PIPES		Gear Ratio	Tight and Loose Pulleys	Cipher
Diam. Inches	Stroke Inches					Suction Inches	Discharge Inches			
3½	4	.325	50 to 60	19.50	75	1½	1¼	6 to 1	12x3	FEVERLY
4	5	.534	50 to 60	31.04	75	2	1½	6 to 1	14x3	FEVER
5	5	.833	50 to 60	49.98	75	2½	2	6 to 1	16x4	FEVERED
5	6	1.000	45 to 55	55.00	75	3	2½	6 to 1	18x4	FEVERING
6	6	1.448	45 to 55	79.64	75	3	2½	6 to 1	20x5	FEVERET
6	10	2.395	40 to 50	119.75	75	4	3	6 to 1	24x5	FEVERISH
7	10	3.279	40 to 50	163.95	75	5	4	6 to 1	28x5	FEVERISHLY
8	10	4.275	40 to 50	213.75	75	6	5	6 to 1	30x6	FEVEROUS

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Horizontal Double-Acting Piston Pumps

Fig. 716, for Medium Service

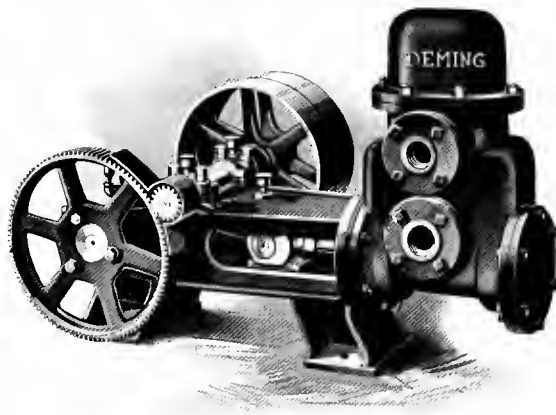


Fig. 716, All Sizes

Fig. 716 is especially recommended for pumping mine water and for brine circulation, tank supply for factories or railway stations, etc.

MAIN FRAME is of heavy box type, and includes bored crosshead guide and babbitt-lined shaft bearings.

CYLINDER is of cast iron with cast bronze liner, and contains the valves which are readily accessible without disturbing pipe connections.

CRANK SHAFT is of best open hearth steel casting, accurately machined.

GEARING is machine cut from the solid.

CONNECTING ROD has babbitt-lined adjustable bearing at the crank end, and bronze bushing at the crosshead end.

CROSSHEAD reciprocates through a bored guide, and has shoes adjustable for wear.

PISTON is fibrous packed.

PISTON ROD is of bronze working through deep stuffing box, with bolted gland.

VALVES are of rubber, on bronze grid seats, which are screwed into the decks.

STANDARD CONSTRUCTION includes tight and loose pulleys, grease cups, wrenches and companion pipe flanges of sizes listed. Modifications of standard construction furnished at extra price.

TYPE "B" DRIVE (Cipher, "TYPEB") for connecting an electric motor includes a substantial cast iron sub-base under pump and motor, with an intermediate gear and rawhide pinion for connecting motor to the pump as illustrated.

TYPE "BA" DRIVE (Cipher, "TYPEBA") includes an intermediate gear and rawhide pinion for connecting an electric motor, the main frame being altered on top to permit mounting the motor thereon. This drive is only furnished with 10-inch stroke sizes and only for motors having frames of comparatively small dimensions.

Fig. 716, Sizes, Capacities, Etc.

PISTONS		Capacity per Revolution Gallons	Revolutions per Minute	Capacity per Minute at Maximum Speed Gallons	Maximum Working Pressure Pounds	DIAM. OF PIPES		Gear Ratio	Tight and Loose Pulleys	*Cipher
Diam. Inches	Stroke Inches					Suction Inches	Dis-charge Inches			
4	5	.534	50 to 60	31.04	75	2	2	6 to 1	14 x 3	FLATLY
5	5	.833	50 to 60	49.98	75	2½	2	6 to 1	16 x 4	FLATLY
5	6	1.000	45 to 55	55.00	75	3	2½	6 to 1	18 x 4	FLATLY
6	6	1.448	45 to 55	79.64	75	3	2½	6 to 1	20 x 5	FLATNESS
6	10	2.395	40 to 50	119.75	75	4	3	6 to 1	24 x 5	FLATTEN
7	10	3.279	40 to 50	163.95	75	5	4	6 to 1	28 x 5	FLATTERY
8	10	4.275	40 to 50	213.75	75	6	5	6 to 1	30 x 6	FLATTERER

*When telegraphing with reference to type "B" or "BA" Drive, place Cipher word "TYPEB" or "TYPEBA" respectively, immediately following the cipher word for the standard belt-driven pump.

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Deming Horizontal Double-Acting Piston Pump

Fig. 716, with Types "B" and "BA" Drives

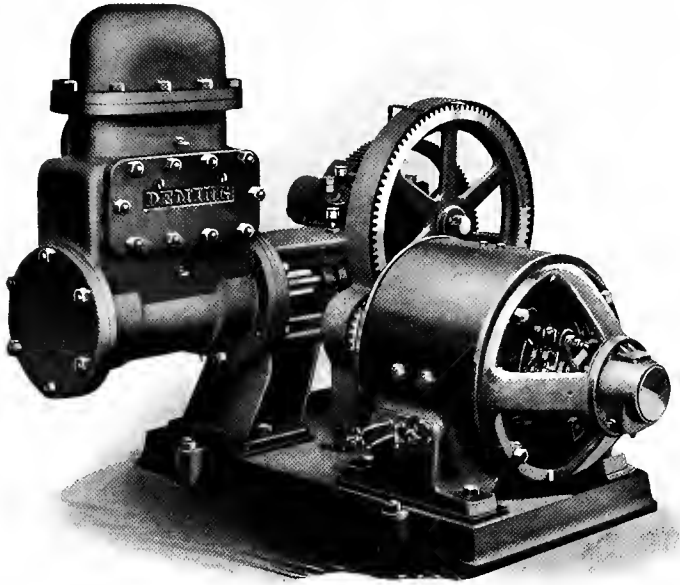


Fig. 716 with Type "B" Drive

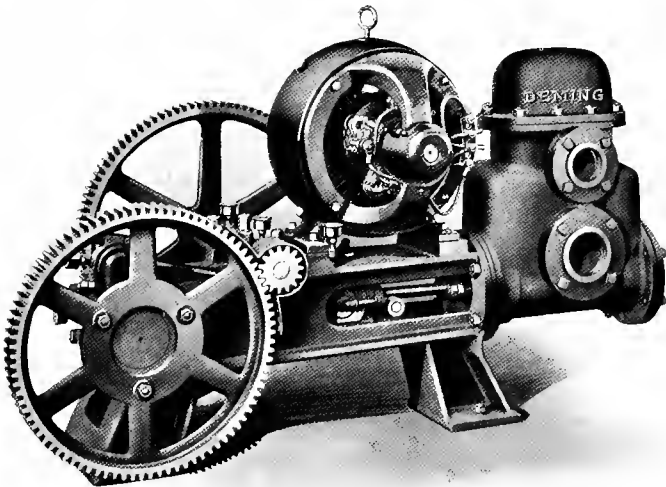


Fig. 716 with Type "BA" Drive

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Horizontal Double-Acting Piston Pump Fig. 696, for Medium Service

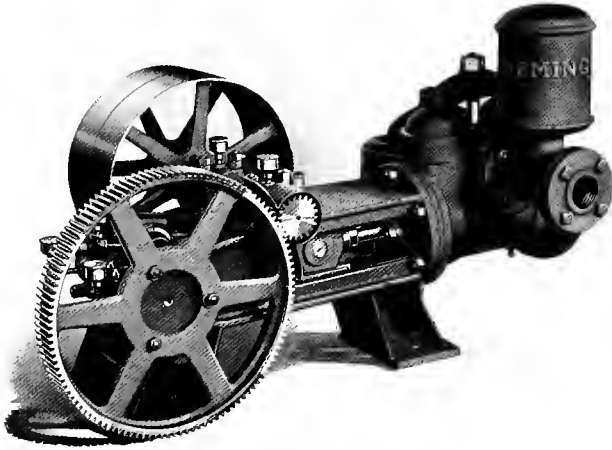


Fig. 696, All Sizes

Fig. 696 differs from our other types of horizontal piston pumps in that all valves are quickly accessible from the top by loosening two nuts. This is especially desirable in handling mine water where small particles of coal or other foreign substances are liable to clog the valves. This pump is also well suited for brine pumping and general water supply where pressure does not exceed 75 pounds.

MAIN FRAME is of heavy box type, and includes bored crosshead guide and babbitt-lined shaft bearings.

CYLINDER is of cast iron with cast bronze liner, and contains all valves.

CRANK SHAFT is of best open hearth steel casting, accurately machined.

GEARING is machine cut from the solid.

CONNECTING ROD has babbitt-lined, divided bearing at the crank end and bronze bushing at the crosshead end.

CROSSHEAD reciprocates through a bored guide, and has shoes adjustable for wear.

PISTON is fibrous packed.

PISTON ROD is of bronze working through deep stuffing box, with bolted gland.

VALVES are of rubber, on bronze grid seats, which are screwed into the decks.

STANDARD CONSTRUCTION includes tight and loose pulleys, grease cups, wrenches and companion pipe flanges of sizes listed. Modifications of standard construction furnished at extra price.

Types "B" and "BA" Drives

Fig. 696 is furnished with Type "B" Drive in all sizes the same as with Fig. 716, and with Type "BA" Drive in size 6 x 10 only.

Fig. 696, Sizes, Capacities, Etc.

PISTONS		Capacity per Revolution Inches	Revolutions per Minute	Capacity per Minute at Maximum Speed Gallons	Max. Working Pressure Pounds	DIAM. OF PIPES		Gear Ratio	Tight and Loose Pulleys	*Cipher
Diam. Inches	Stroke Inches					Suction Inches	Discharge Inches			
5	5	.833	50 to 60	49.98	75	2	2	6 to 1	16 x 4	FRILL
6	6	1.448	45 to 55	79.64	75	3	2½	6 to 1	20 x 5	FRILLED
6	10	2.395	40 to 50	119.75	75	4	3	6 to 1	24 x 5	FRILLING

*When telegraphing with reference to type "B" or "BA" Drive, place the cipher word "TYPEB" or "TYPEBA" respectively, immediately following the cipher word for the standard belt-driven pump.

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DEEP WELL WORKING HEADS

FOR

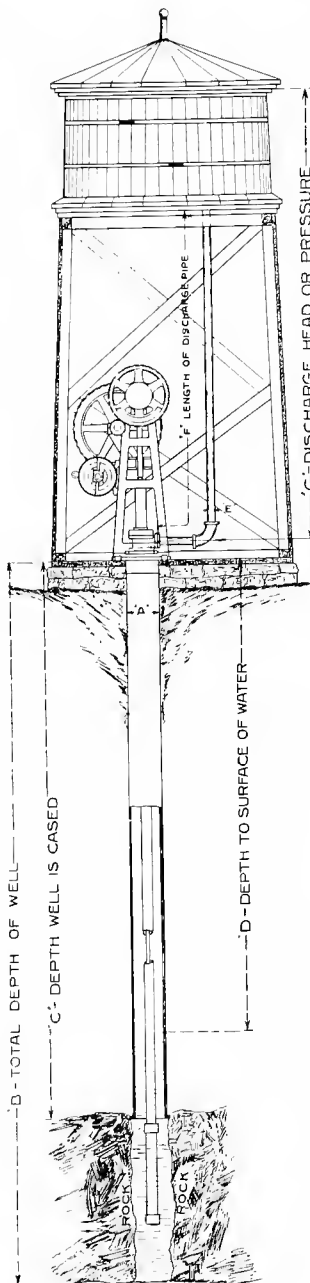
SPECIAL WATER SUPPLY

EMBRACING VARIOUS TYPES OF
POWER WORKING HEADS FOR
USE WITH DEMING BRASS ARTE-
SIAN WELL AND OTHER TYPES
OF CYLINDERS; ADAPTED FOR
OPERATION BY ELECTRIC
MOTOR, GAS, OR GASOLINE EN-
GINE, STEAM ENGINE AND
WINDMILL; USING BELT, GEAR-
ING OR CONNECTING ROD.





Deep Well Pumping



Information Desired to Enable Us to Intelligently
Recommend the Best Style of
Deep Well Pump

- "A" Inside diameter of well casing inches.
- "B" Total depth of well feet.
- "C" Depth well is cased feet.
- "D" Depth to surface of water feet.
- "E" Inside diameter of discharge pipe inches.
- "F" Length of discharge pipe feet.
- "G" Discharge head . . feet (or discharge pressure . . pounds per square inch).

Does water level recede when well is pumped, and how much?

What capacity in gallons per minute is wanted at discharge?

What power is available to operate pump?

If electric power is available, and price on electric motor is wanted, state kind of current and voltage of same, and if alternating, state phase and cycles.

Suggestions Concerning the Installation of Deep Well Pumps

The cylinder should be placed at such depth as to insure its being constantly submerged, and unless tests show that the water level does not recede materially it is advisable to place the cylinder near the bottom of the well.

In placing the cylinder in the well special care should be taken to make all pipe and sucker rod joints tight.

For convenience in shipping, cylinders are usually sent with the plunger and lower valve screwed together, and these must be disconnected before lowering the cylinder in the well.

We are not liable for damage done or trouble caused by sand, gravel, chips or any substance other than clear water. The well is supposed to have a straight clear bore of the size specified so that the pump parts will go into it when reasonable clearance is allowed, and also to furnish sufficient clear water to supply the pump.



Deming Deep Well Power Working Head Fig. 78, with Differential Plunger

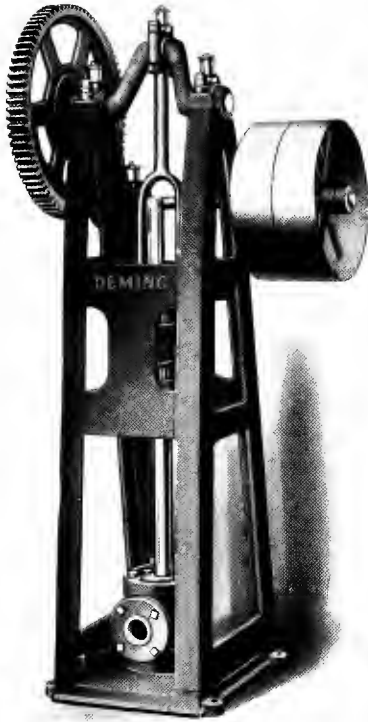


Fig. 78 is designed to operate deep well cylinders where the total head and sizes of cylinders do not exceed those listed in table below.

FRAME consists of two cast iron standards bolted to the base below and to the rod guide above in such a manner as to secure very rigid construction. The rod guide is easily removable, thereby affording clear space for the withdrawal of sucker rods without removing the main frame.

BEARINGS for crank shaft and pinion shaft are of large size, and lined with best babbit metal.

CRANK SHAFT is of best open hearth steel casting. GEARING is machine cut, the main gear being bolted to a large flange which is integral with the crank shaft.

CONNECTING ROD is of steel with marine type babbitted box at the crank end, while the crosshead pin works in bronze bushing.

DIFFERENTIAL PLUNGER is of cast iron, working through outside packed stuffing box, and equalizes the flow of water, thus adding to the economy and ease of operation.

GREASE CUPS, or Oil Cups if specified, and wrenches are furnished with pumps.

Fig. 78 with Type "BA" Drive (Cipher "TYPEBA") is in design the same as Fig. 78, except furnished with gearing connection for electric motor, the motor being bolted direct to the main standards thereby greatly economizing space required for installation.

Fig. 324 single-acting cylinders with Fig. 636 wood sucker rod, or Fig. 1324 double-acting cylinders with extra strong pipe sucker rod, are recommended for use with Fig. 78.

In corresponding, give as fully as possible the particulars asked for on page 226, and if working head only is wanted, specify sizes of drop pipe and discharge pipe, and also threads on sucker rod.

Fig. 78, Sizes, Etc.

Stroke Inches	MAXIMUM DIAMETER OF PIPES		Gear Ratio	Tight and Loose Pulleys	Height Inches	*Cipher
	Suction Inches	Discharge Inches				
16	6	3	6 to 1	20 x 5	84	OLYMPIAN
24	6	3	6 to 1	28 x 6	108	OLYMPIC

*When telegraphing with reference to Fig. 78 with Type "BA" Drive, place the word "TYPEBA" immediately following the cipher word for the standard Fig. 78 head.

Fig. 78, Capacities

MAXIMUM SPEED AND CAPACITY PER MINUTE									
WITH FIG. 324 SINGLE-ACTING CYLINDERS						WITH FIG. 1324 DOUBLE-ACTING CYLINDERS			
Diam. of Cylinder Inches	16-inch Stroke		24-inch Stroke		†Maximum Depth of Well Feet	Diam. of Cylinder Inches	24-inch Stroke		†Maximum Depth of Well Feet
	Revs.	Gallons	Revs.	Gallons			Revs.	Gallons	
3¼	35	20.1	28	24	350	3¼	28	44	265
3¾	35	26.7	28	32	290	3¾	28	60	215
4¼	35	34.3	28	41	200	4¼	28	79	150
4¾	35	42.6	28	51	165	4¾	28	96	125
5¼	35	62.9	28	75	120	5¼	28	138	90

†From lowest surface of water in well to highest point of delivery.

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Deep Well Power Working Heads

Figs. 80 and 82, with Differential Plunger

Figs. 80 and 82 Deep Well Working Heads are designed for the operation of deep well cylinders, and have incorporated such desirable features as our extensive experience in this line of pumping machinery indicates as the best.

Fig. 82 differs from Fig. 80 (illustrated on page 229) in having double crank gears, and outboard bearing and stand.

BEARINGS are lined with best anti-friction metal, the pinion shaft bearings being bolted to the main housings.

GEARING is machine cut, the main gear (or gears) being bolted to a large flange (or flanges) integral with the crank shaft.

CONNECTING ROD is of steel with marine type box at the crank end, and bronze bushing at the crosshead end.

CROSSHEAD has bronze shoe adjustable for wear, and runs in polished guides.

DIFFERENTIAL PLUNGER is furnished and equalizes the flow of water, with consequent greater economy and ease of operation.

AIR CHAMBER is supplied; also Grease Cups, or Oil Cups if preferred, and wrenches furnished with all pumps.

Discharge can be connected at either front or back of pump.

When electric motor or steam engine is to be direct connected, we can furnish these working heads with the different Types of Drive as described below and illustrated on pages 90 and 91.

Type "B" Drive (Cipher, TYPEB) consists of connecting an electric motor by an intermediate gear and rawhide pinion, the pump being provided with a heavy cast iron shelf at the back, on which shelf the motor is mounted.

Type "BA" Drive (Cipher, TYPEBA) has the motor bolted directly to the vertical side of the upright housing, and is connected by gearing. This requires turning the end bearings of the motor at right angles to their usual position with reference to the motor feet.

Type "N" Drive (Cipher, TYPEN) consists of direct connecting a single cylinder Vertical Steam Engine by a single reduction of gearing, the engine being mounted on a heavy cast iron shelf which is securely bolted to the base and main housing.

Motor for Types "B" and "BA" Drives, or engine for Type "N" Drive can be furnished, if wanted, at extra charge.

Fig. 324 Single-Acting Cylinders with Fig. 636 Wood Sucker-Rod, or Fig. 1324 Double-Acting Cylinders with extra strong pipe sucker-rod, are recommended for use with Figs. 80 and 82.

In corresponding, give the information asked for on page 226, and if working head only is wanted, specify sizes of drop pipe and discharge pipe and also threads on sucker rod.

Figs. 80 and 82, Sizes, Etc.

Stroke Inches	MAXIMUM DIAM. OF PIPES		Gear Ratio	TIGHT AND LOOSE PULLEYS		Height Inches	*CIPHER	
	Suction Inches	Discharge Inches		Fig. 80	Fig. 82		Fig. 80	Fig. 82
16	9	4	6 to 1	28 x 6	.....	76	ORIENT	.....
24	9	4	5 1/4 to 1	36 x 6	36 x 8	98 1/2	ORIENTAL	ORNAMENTAL

*When telegraphing with reference to Type "B," "BA" or "N" Drive, place the cipher word representing the type immediately following the cipher word for the standard pump.

MAXIMUM SPEED AND CAPACITY PER MINUTE WITH FIG. 324 SINGLE-ACTING CYLINDERS						MAXIMUM SPEED AND CAPACITY PER MINUTE WITH FIG. 1324 DOUBLE-ACTING CYLINDERS					
Diam. of Cylinder Inches	16-Inch Stroke		24-Inch Stroke		†MAXIMUM DEPTH OF WELL, FEET		Diam. of Cylinder Inches	24-Inch Stroke		†MAXIMUM DEPTH OF WELL, FEET	
	Revs.	Gallons	Revs.	Gallons	Fig. 80	Fig. 82		Revs.	Gallons	Fig. 80	Fig. 82
4 1/4	35	34	28	41	540	725	4 1/4	28	79	400	540
4 3/4	35	42	28	51	450	600	4 3/4	28	96	340	450
5 1/4	35	52	28	63	360	485	5 3/4	28	138	225	300
5 3/4	35	62	28	75	300	400	6 1/2	28	180	160	215
6 1/4	35	74	28	89	250	335	7 1/2	28	238	120	160
6 3/4	35	86	28	104	210	285	8 1/2	28	298	100	130
7 1/4	35	114	28	137	150	215	.....	.....	.....	.....	.....
8 1/2	35	137	28	164	130	170

†From lowest surface of water in well to highest point of delivery.

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Deming Deep Well Power Working Head

Figs. 80 and 82, with Differential Plunger



Fig. 80, 24-inch Stroke

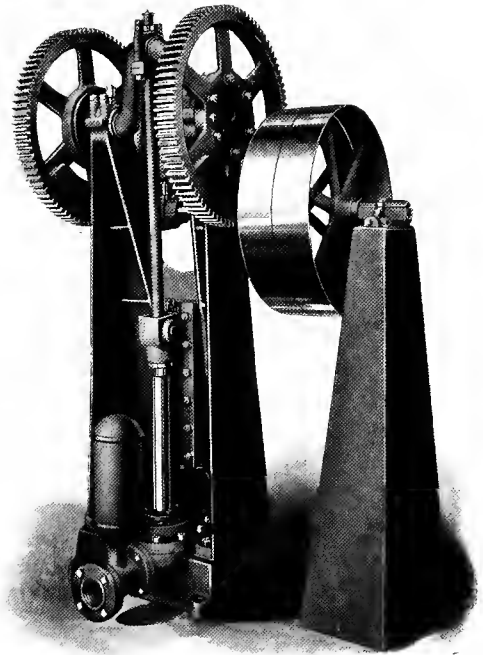


Fig. 82, 24-inch Stroke



Deming Deep Well Power Working Heads

Figs. 81 and 83, with Differential Plunger

Figs. 81 and 83 Deep Well Working Heads are exceptionally strong in construction and are designed for operating either single or double-acting cylinders of larger sizes than our other working heads, and at much greater depths. These working heads require an open well or pit, for the accommodation of the lower working parts, this being especially desirable in cold climates, as the discharge is below the frost line.

Fig. 83 differs from Fig. 81 in having double crank gearing, and being adapted for somewhat heavier plunger loads.

MAIN BED PLATE is of cast iron of unusually heavy design, and is supported on the walls of the pit by "I" beams or other supports. The well frame and crosshead guide are bolted to the bed plate in such a manner as to secure perfect alignment and freedom from vibration.

CRANK SHAFT is of best open hearth steel in one piece.

BEARINGS are lined with best anti-friction metal, the pinion shaft bearings being bolted to the main frame to permit of securing accurate alignment of gearing.

GEARING is machine cut, the large gear (or gears) being bolted to a large flange (or flanges) integral with the crank shaft.

CONNECTING ROD is of steel, with marine type of box at the crank end, and with bronze box having wedge and screw adjustment at the crosshead end.

CROSSHEAD is fitted with bronze shoes admitting of adjustment for wear, and runs in bored guide.

DIFFERENTIAL PLUNGER is furnished and equalizes the flow of water, thereby adding greatly to the efficiency of the single acting cylinder.

AIR CHAMBER supplied with pump.

GREASE CUPS, or Oil Cups if specified, and wrenches furnished with all pumps.

SPECIAL CONSTRUCTION: Working Head furnished with friction coupling for direct connecting engine, or with extended bed plate and gearing connection for electric motor, at extra charge. See the various Types of Drive on pages 208 to 212 inclusive.

Fig. 324 Single-Acting Cylinders with Fig. 636 Wood Sucker-Rod, or Fig. 1324 Double-Acting Cylinders with extra strong pipe sucker-rod, are recommended for use with Figs. 81 and 83.

In corresponding, give fully as possible the information asked for on page 226, and if working head only is wanted, specify sizes of drop pipe and discharge pipe, and also threads on sucker-rod.

Figs. 81 and 83, Sizes, Etc.

Stroke Inches	MAX. DIAM. OF PIPES		Gear Ratio	TIGHT PULLEY ONLY		CIPHER	
	Suction Inches	Dischg. Inches		Fig. 81	Fig. 83	Fig. 81	Fig. 83
36	10	5	6 to 1	42 x 12	48 x 12	OCTUPLE	OCTUOR

USUAL SPEED AND CAPACITY PER MINUTE WITH FIG. 324 SINGLE-ACTING CYLINDERS

USUAL SPEED AND CAPACITY PER MINUTE WITH FIG. 1324 DOUBLE-ACTING CYLINDERS

Diam. of Cylinder Inches	Revs.	Gallons	*MAXIMUM DEPTH OF WELL, Feet		Diam. of Cylinder Inches	Revs.	Gallons	*MAXIMUM DEPTH OF WELL, Feet	
			Fig. 81	Fig. 83				Fig. 81	Fig. 83
6¼	25	119	440	550	5¾	25	185	390	485
6¾	25	139	375	470	6½	25	241	300	375
7¾	25	183	285	360	7½	25	318	230	290
8½	25	220	235	300	8½	25	403	180	225
9½	25	276	190	240	9½	25	513	140	175

*From lowest surface of water in well to highest point of delivery.

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Deming Deep Well Power Working Head

Figs. 83 and 81, with Differential Plunger

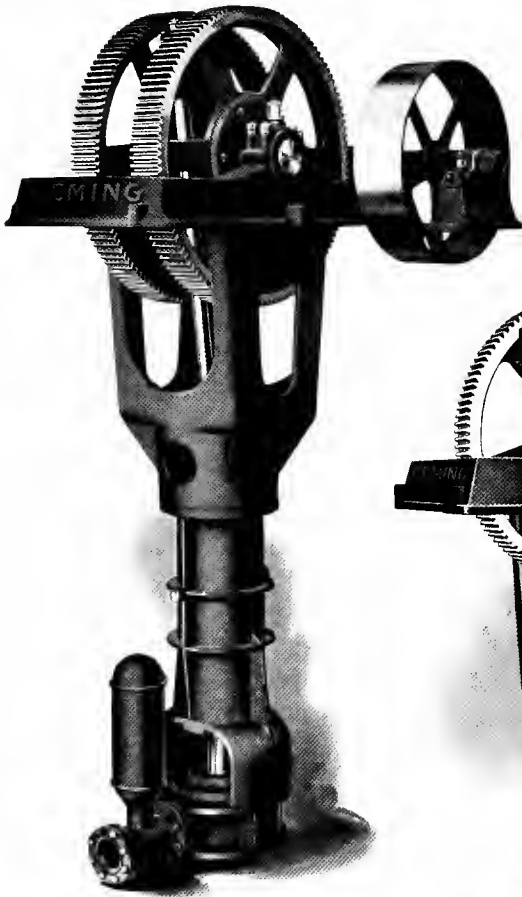


Fig. 83



Fig. 81



Deming Deep Well Power Working Head

Fig. 61 with Differential Plunger

Fig. 61 Deep Well Working Head is of very rigid construction throughout, and its "low down" design, together with other features, make it one of the most desirable deep well pumps on the market for the work for which it is adapted. Access to the well for repairing cylinder or rod is quickly and easily made, and the crank shaft is provided with a winch pulley for use in pulling up the rod or pipe by power. The stroke is adjustable, permitting the regulation of the pump capacity to the supply of water in the well.

MAIN FRAME is of cast iron of very heavy design, and contains both the crank and pinion shaft bearings which are lined with best anti-friction metal.

GEARING is machine cut, the crank gear being bolted to a large flange integral with the crank shaft and located between the main bearings.

CRANK SHAFT, Connecting Rod, Link and Walking Beam are all of steel.

CROSSHEAD is babbitt lined and provided with lubrication, and the guide rods are of polished steel held in rigid alignment by stay rods extending to the main standard.

DISCHARGE HEAD is located above the base and can be readily turned to discharge to the front as illustrated, or to the right or left as desired.

DIFFERENTIAL PLUNGER works through an outside packed stuffing box with bolted gland.

FIG. 61 WITH TYPE "B" DRIVE (Cipher, TYPEB) is furnished with extended cast iron bed plate and gearing connection for electric motor. Motor can be furnished at extra charge.

FIG. 61 WITH TYPE "K" DRIVE (Cipher TYPEK) is furnished with friction cut-off coupling for direct connecting with gas or gasoline engine when speed of engine is not too great to permit this drive. When engine speed exceeds 200 R. P. M., provision is made for a double reduction of gearing and an extra bearing for a secondary shaft to which a higher speed engine can be connected by friction coupling. Prices for Type "K" Drive are quoted on application with statement of engine horse power and speed.

In connection with Fig. 61 working head we recommend using our Fig. 324 Artesian Well Cylinder and Fig. 636 octagon wood sucker rod.

In corresponding, give as fully as possible conditions under which working head is to be operated, and if working head only is required, specify size of cylinder in use and also threads on sucker rod. See page 226.

Fig 61, Sizes, Etc.

Stroke Inches	MAXIMUM DIAMETER OF PIPES		Standard Gear Ratio	Tight and Loose Pulleys	Maximum Height Inches	*Cipher
	Suction Inches	Discharge Inches				
20, 22 & 24	9	4	6.5 to 1	30 x 6	79	ODONTOID

*When telegraphing with regard to Type "B" or "K" Drive, place the cipher word representing the Type of Drive immediately following the cipher word for the standard pump.

Diameter and Stroke of Cylinder, Inches	CAPACITY			†Maximum Depth of Well, Feet	Diameter and Stroke of Cylinder, Inches	CAPACITY			†Maximum Depth of Well, Feet
	Gals. per Rev. of Cr. Shaft	Max. Revs. per Min.	Gallons per Min.			Gals. per Rev. of Cr. Shaft	Max. Revs. per Min.	Gallons per Min.	
3 1/4 x 24	.862	28	24	900	5 3/4 x 24	2.696	28	75	300
3 3/4 x 24	1.147	28	32	690	6 1/4 x 24	3.190	28	89	250
4 1/4 x 24	1.470	28	41	540	6 3/4 x 24	3.716	28	104	210
4 3/4 x 24	1.841	28	51	450	7 3/4 x 24	4.900	28	137	150
5 1/4 x 24	2.250	28	63	360	8 1/2 x 24	5.880	28	164	130

†From lowest surface of water in well to highest point of delivery.

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Deming Deep Well Power Working Head

Fig. 61, with Differential Plunger

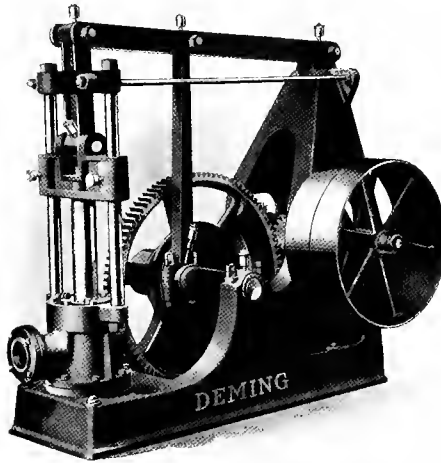


Fig. 61 with Pulleys

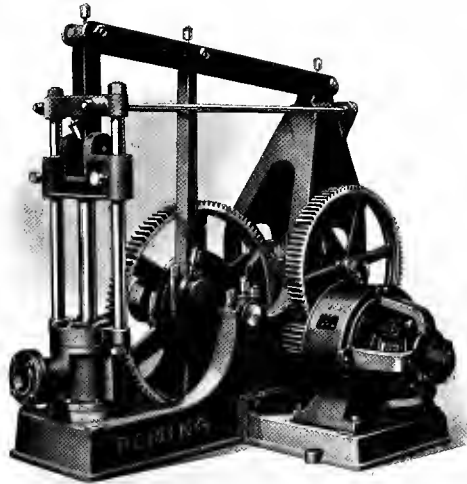


Fig. 61 with Type "B" Drive



Deming Deep Well Power Working Head

Fig. 62, with Differential Plunger

Fig. 62 is adapted especially for supplying water from deep wells for private estates manufacturing plants, farms, etc. It is very substantially built, and the "low-down" design, as well as other features, make it the most accessible deep well pump on the market. By disconnecting the differential plunger from the crosshead and the walking beam from the connecting rod, and removing the stuffing-box cap, the plunger can be readily withdrawn without disturbing the pipe connections. The stroke is adjustable, thereby permitting the easy regulation of the pump capacity to the flow of the water in the well.

The main base is of cast iron, and carries the crank and pinion shaft bearings, which are lined with best babbitt metal.

The gearing is machine cut, the main gear being bolted to a flange integral with the crank shaft.

The crosshead is babbitt lined, and the guide rods are of polished steel.

Each pump has a differential plunger which discharges part of the water on the down stroke, thus equalizing the load and giving a more uniform flow of water. The stuffing-box is very easy of access for repacking, the gland being of the bolted type. Air chamber furnished at extra price.

Fig. 62 with Type "B" Drive (Cipher, TYPEB) is the standard pump without pulleys, but with extended base and gearing connection for electric motor. On pages 278 to 281 Fig. 62 is illustrated with air pumping devices for use in hydro-pneumatic water systems.

Fig. 62 with Type "C" Drive (Cipher, TYPEC) is the standard pump mounted on sub-l ase for connection to electric motor, and including short belt and belt tightener.

With these working heads we recommend using our Fig. 324 or Fig. 311 artesian well cylinders and Fig. 636 octagon wood sucker rod. See diagram on page 226.

Fig. 62, Sizes, Etc.

Stroke Inches	MAXIMUM DIAMETER OF PIPES		Gear Ratio	Tight and Loose Pulleys	Maximum Height, Inches	*CIPHER Standard Pump with Pulleys
	Suction Inches	Discharge Inches				
8, 9 and 10	4½	2½	6 to 1	16 x 3	40½	ODIN
12, 14 and 16	6	3	7 to 1	20 x 5	51	ODIUM
20, 22 and 24	8	4	6¾ to 1	28 x 6	73	ODIZE

*When telegraphing with regard to the Type "B" or "C" Drive, place the cipher word representing the Type of Drive immediately following the cipher word for the standard pump.

Fig. 62, Capacities

Diam. and Stroke of Cylinder	CAPACITY			†Maximum Depth of Well, feet
	Gallons per Rev. of Crank Shaft	Maximum Revs. per Min.	Gallons per Min.	
2¾ x 10	.257	40	10.2	300
2¾ x 16	.411	35	14.3	300
2¾ x 24	.617	28	17.2	350
3¾ x 10	.478	40	19.1	175
3¾ x 16	.765	35	26.7	175
3¾ x 24	1.147	28	32.1	190
4½ x 10	.614	40	24.5	130
4½ x 16	1.227	35	42.9	100
4½ x 24	1.841	28	51.5	120
5¾ x 16	1.798	35	62.9	70
5¾ x 24	2.696	28	75.4	80
6¾ x 24	3.716	28	104.0	60
7¾ x 24	4.900	28	137.2	45

†Refers to vertical distance from lowest surface of water in well to highest point of delivery.

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Deming Deep Well Power Working Head

Fig. 62, with Differential Plunger

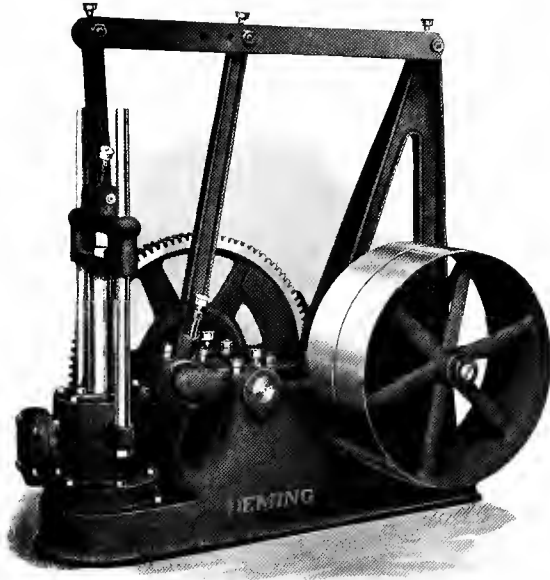


Fig. 62, 24-inch Stroke

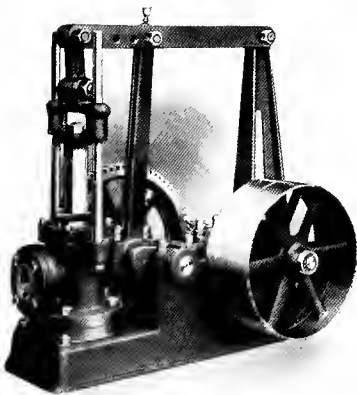


Fig. 62, 10-inch Stroke

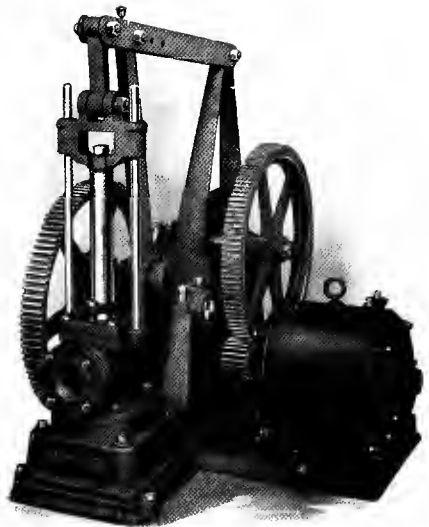


Fig. 62, 16-inch Stroke with Type "B" Drive



Deming Geared Deep Well Power Working Head

Shown also in Hydro-Pneumatic Section

Pages 274 to 277

Fig. 66

FIG. 66 is very compactly and substantially designed, and is adapted especially for pumping water from deep wells for suburban homes and other places requiring a moderate water supply. All parts are readily accessible. The lower valves, plunger and rod can be withdrawn without disturbing any pipe connections. The standard head includes cut gearing, tight and loose pulleys and oil cups, as illustrated.

When desired, it is furnished at extra charge with extended walking beam and counterweight for equalizing the plunger load, and with air compressor for supplying air for pneumatic pressure tank system. The compressor consists of a special air cylinder mounted on the base, the plunger being operated from the crosshead of the working head. A pipe from the compressor connects it with the pump discharge, there being also a check valve and necessary couplings in this pipe. An air cock is also provided so that when opened, air will not be delivered to the tank.

TYPE "CS" DRIVE. When the pump is to be driven by motor, the drive as illustrated is recommended. It consists of a cast-iron shelf hinged to the main frame of the working head, the motor being mounted on this shelf and belted to the working head. The weight of the shelf and motor always maintains a tight belt with good belt contact, and is moreover much quieter in operation than if connected by gearing. We recommend the use of our Figs. 311 or 324 artesian well cylinders with this working head.

Specifications, Prices, Capacities, Etc.

Stroke Inches	MAXIMUM DIAMETER OF PIPES		Gear Ratio	Tight and Loose Pulleys	Maximum Height Inches	Weight With Tight and Loose Pulleys Pounds	*Cipher
	Suction Inches	Discharge Inches					
6	3 $\frac{1}{2}$	1 $\frac{1}{2}$	6 to 1	12 x 3	25	250	ORRIS

Diameter of Cylinder Inches	CAPACITY			‡Maximum Depth of Well Feet
	Gallons per Rev. of Crank Shaft	Usual Revs. per Minute	Gallons per Minute	
1 $\frac{3}{4}$	.063	40	2.52	300
2 $\frac{1}{4}$	.103	40	4.12	175
2 $\frac{3}{4}$	.154	40	6.16	115
3 $\frac{1}{4}$	.215	40	8.60	80

With Tight and Loose Pulleys	Without Tight and Loose Pulleys	Extra for Hand Operating Attachment	Extra for Type "CS" Drive including Belt (Motor not included)	Extra for Extended Walking Beam and 100-Lb. Counterweight	Extra for Air Compressor Including Piping Connections
\$70.00	\$65.00	\$7.00	\$20.00	\$15.00	\$15.00

*When telegraphing with reference to working head with Type "CS" Drive, place cipher word "TYPECS" immediately following cipher word "ORRIS."

‡Refers to vertical distance from surface of water to point of delivery or equivalent pressure.

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Deming Geared Deep Well Working Head

Shown also in Hydro-Pneumatic Section

Pages 274 to 277

Fig. 66

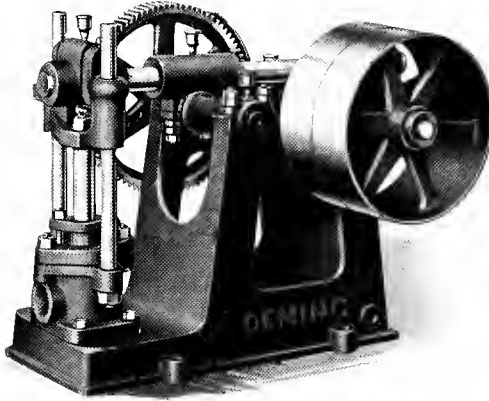


Fig. 66, with Tight and Loose Pulleys

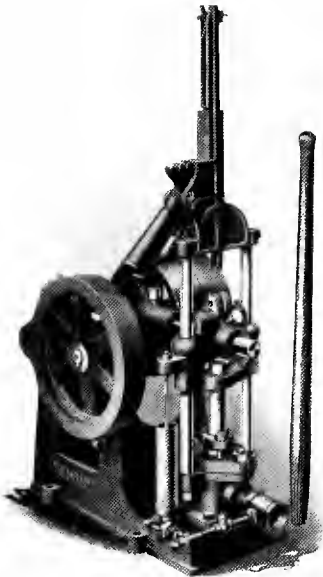


Fig. 66, with Hand Operating Attachment

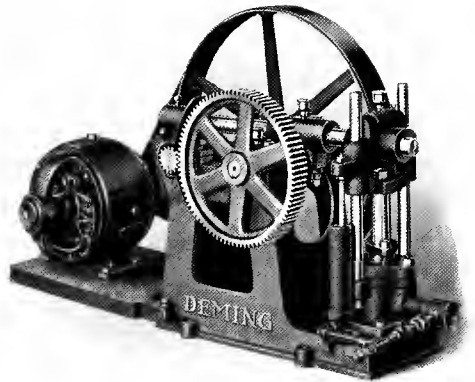


Fig. 66, with Type "CS" Drive and Air Compressor

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Single-Acting Duplex Power Piston Pump

Fig. 709, for Deep Open Wells

Fig. 709 is for use in open wells of small inside dimensions where the water is too low to be reached by suction from the surface. There being but two cylinders it can be used in considerably smaller diameter wells than required for Fig. 710 Triplex Pump. See pages 240 and 241. The power end is mounted on "I" beams or other supports at the surface, and the cylinders are secured to supports in the well within suction distance of the water.

Specifications

CRANK SHAFT is of the best open hearth steel in one piece with flange, to which is bolted the main gear. Gearing is machine cut.

CYLINDERS are of close grained iron with brass liners.

CROSSHEADS are cylindrical, of cast iron, and run in bored guides.

CONNECTING RODS are of steel, with babbitt lined adjustable boxes at crank end, and with bronze bushings at the crosshead end.

PISTON RODS and Pistons are of bronze, the pistons being packed with hydraulic crimps.

VALVES are rubber discs on bronze grid seats, with cylindrically wound springs.

WELL RODS are guided by Fig. 389 double roller guides (shown on page 114), when depth of well requires. Well Rods, Couplings and Double Roller Guides are furnished as extras, being governed by the depth of the well.

AIR CHAMBER and discharge check valve are supplied.

GREASE CUPS, or Oil Cups if specified, and wrenches, are furnished with pump.

Fig. 709, Sizes, Capacities, etc.

PISTONS		CAPACITY			*Max. Elevation Feet	DIAM. OF PIPES		Gear Ratio	Pulleys	Outside Dimensions Water End Inches	Cipher
Diam. Inches	Stroke Inches	Gals. per Rev.	Usual Revs. per Min.	Gals. per Min.		Suction Inches	Discharge Inches				
3	10	.57	40	22.8	300	3	3	5 to 1	18 x 4	14 x 14	OCCCLUSION
3½	10	.80	40	32.0	225	3	3	5 to 1	18 x 4	14 x 14	OCCUPANT
4	10	1.03	40	41.2	170	3	3	5 to 1	18 x 4	14 x 14	OCCURRENCE
5	10	1.59	40	63.6	300	4	4	5 to 1	24 x 5	16½ x 17	OCEANIC
6	10	2.34	40	93.6	210	5	4	5 to 1	24 x 5	18½ x 18¼	OCELOT

*Elevation includes total lift from surface of supply to highest point of delivery.

Deming Single-Acting Duplex Power Piston Pump

Fig 709, for Deep Open Wells

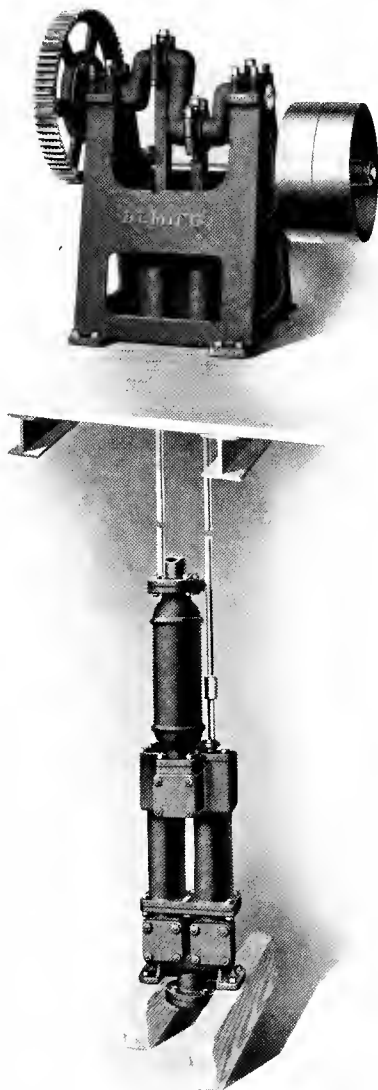


Fig. 709, all Sizes



Deming Single-Acting Triplex Power Piston Pump

Fig. 710, for Deep Open Wells

Fig. 710 is designed for use in deep open wells where the water is too low to be reached by suction from the surface. The power end is mounted on "I" beams or other supports at the surface, and the cylinders are secured to supports in the well within suction distance of the water.

FRAME is cast iron and includes the bored crosshead guides, and also the shaft bearings which are lined with the best anti-friction metal.

CRANK SHAFT is of the best open hearth steel in one piece with flange, to which is bolted the main gear. Gearing is machine cut.

CYLINDERS are of close grained iron with brass liners.

CROSSHEADS are cylindrical, of cast iron, and run in bored guides.

CONNECTING RODS are of steel, with babbitt lined adjustable boxes at crank end, and with bronze bushings at the crosshead end.

PISTON RODS and Pistons are of bronze, the pistons being packed with hydraulic crimps.

VALVES are rubber discs on bronze grid seats, with cylindrically wound springs.

WELL RODS are guided by Fig. 389 double roller guides, shown on page 114, when depth of well requires. Well Rods, Couplings and Double Roller Guides are furnished as extras, being governed by the depth of the well.

AIR CHAMBER and discharge check valve are supplied.

GREASE CUPS, or Oil Cups if specified, and wrenches are furnished with pump.

Fig. 710, Sizes, Capacities, Etc.

PISTONS		CAPACITY			*Max. Elevation Feet	DIAM. OF PIPES		Gear Ratio	Pulleys	Outside Dimensions Water End Inches	Cipher
Diam. Inches	Stroke Inches	Gals. per Rev.	Usual Revs. per Min.	Gals. per Min.		Suction Inches	Discharge Inches				
3	10	.86	40	33.4	300	3	3	5 to 1	20 x 5	21 x 14	ODGRATE
3½	10	1.20	40	48.0	225	3	3	5 to 1	20 x 5	21 x 14	ODORLESS
4	10	1.55	40	62.2	170	3	3	5 to 1	20 x 5	21 x 14	OFFERTORY
5	10	2.39	40	95.6	300	4	4	5 to 1	28 x 6	24 x 17	OFFICIATE
6	10	3.51	40	140.4	210	5	4	5 to 1	28 x 6	24 x 18¼	OFFSPRING

*Elevation includes total lift from surface of supply to highest point of delivery.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Single-Acting Triplex Power Piston Pump
Fig. 710, for Deep Open Wells

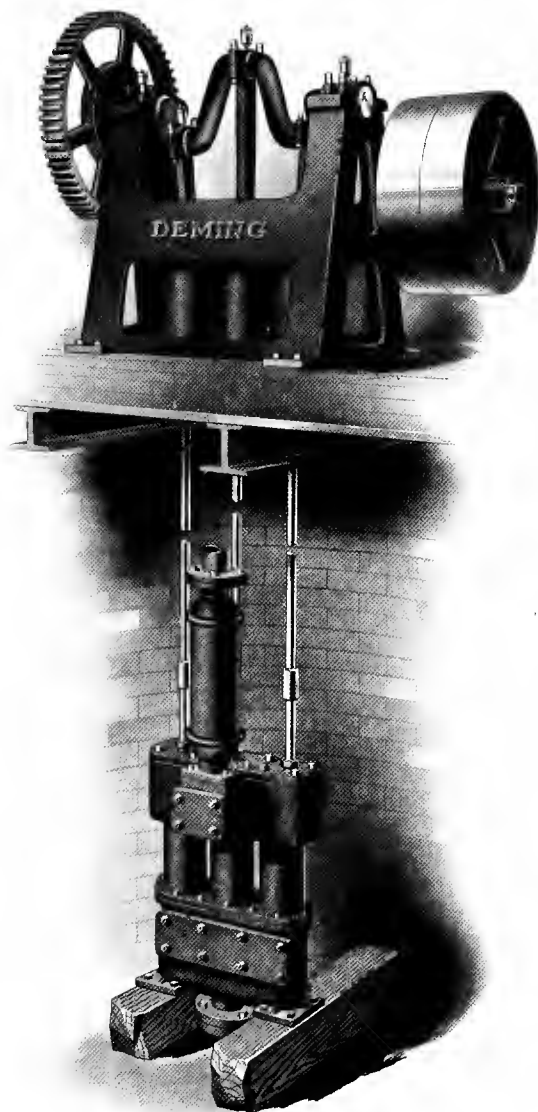


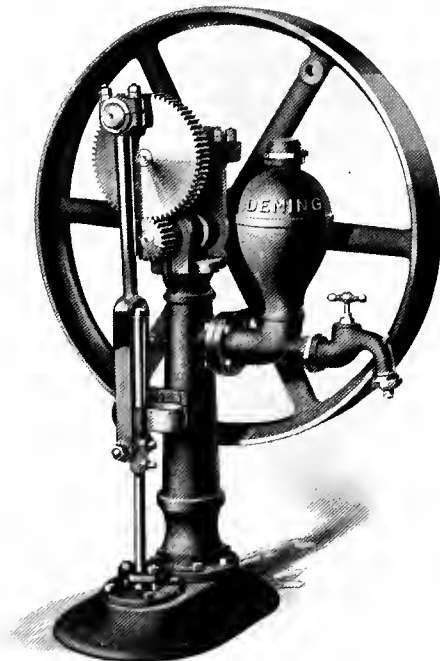
Fig. 710, All Sizes



Deming Deep Well Force Pump Standard

With Gearing and Pulley Fly-Wheel
Will Lift and Force 50 to 175 Feet

Fig. 586



The standard illustrated is adapted for elevating water from deep wells when used in connection with our deep well cylinders, Figs. 311 and 324. The fly-wheel is made heavy and broad so that a belt can be attached for running by power. A handle is also attached to the fly-wheel for operating by hand if desired. Gearing is machine-cut, having a ratio of 3 to 1.

The illustration shows the No. 3 pump; No. 2 having air chamber and upward discharge; and No. 3, air chamber and cock spout. If water is to be elevated or conveyed a considerable distance, a pipe flange is used and is furnished instead of a spout when so ordered.

Sizes and Prices

No.	*Fitted for Pipe Inches	Stroke Inches	Pulley Fly-Wheel Inches	Discharge	Will Lift and Force		Weights Pounds	Cipher	Price
					In. Cyl.	Feet			
1	1½	7	36 x 4½	Plain Spout or Flange	2¼	175	342	BRAVADO	\$65.00
2	1½	7	36 x 4½	With Air Chamber	2¾	120	362	BRAVELY	68.00
					3¼	80			
3	1½	7	36 x 4½	Air Chamber and Cock	3¾	60	364	BRAVING	70.00
					4¼	50			

* Can be fitted 4 inches or smaller.



Deming Geared Deep Well Working Head

Fig. 569



Fig. 569

Fig. 569 illustrates our Pump Standard for wells of medium depth. It has adjustable stroke (6, 8 and 10-inch) and is furnished with machine cut gearing having a ratio of three to one, and with tight and loose pulleys for operating by power. Fly wheel pulley 36 inches diameter can be furnished, if desired, in place of the tight and loose pulleys.

The illustration shows the No. 2 Pump with air chamber by which water can be forced upward through the top of the air chamber, or through the spout.

In connection with this standard we recommend the use of our Fig. 311 cylinders, or any other type of brass, brass lined or iron deep well cylinder.

In corresponding, give as fully as possible the particulars asked for on page 226, and if working head only is wanted, specify sizes of drop pipe and discharge pipe and also threads on sucker rod.

Fig. 569, Sizes, Prices, Etc.

No.	Stroke Inches	*Suction Fitted for Pipe Inches	Discharge	Gear Ratio	Tight and Loose Pulleys
1	6, 8 and 10	1¼ to 3	{ With Flange for 1¼ to 2-inch pipe	3 to 1	20 x 5
2	6, 8 and 10	1¼ to 3	{ With Double Discharge Air Chamber, as illustrated	3 to 1	20 x 5
3	6, 8 and 10	1¼ to 3	{ With Air Chamber and Cock	3 to 1	20 x 5

†Lift and Force	WITH PULLEYS		WITH FLY WHEEL	
	Cipher	Price	Cipher	Price
2¼-inch cylinder, 175 feet }	BRAVO	\$78.00	BRAWNY	\$75.00
2¾-inch cylinder, 120 feet }				
3¼-inch cylinder, 80 feet }	BRAWL	81.00	BRAWY	78.00
3¾-inch cylinder, 60 feet }	BRAWLER	83.00	BRAZEN	80.00

*Unless otherwise specified, suction is fitted for 1½-inch pipe and discharge for 1¼-inch pipe.

†From lowest surface of water in well to highest point of delivery.

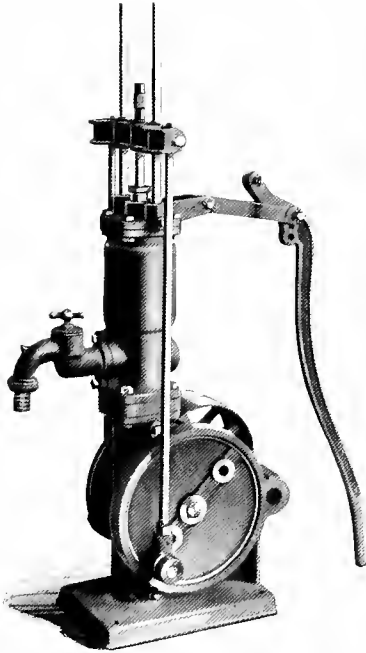
Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming "Straight-Line" Power Working Head

For Operating Shallow and Deep Well Cylinder
For Wells 300 Feet Deep or Less

Fig. 1717



This Power Working Head embraces more desirable features than have heretofore been combined in any one machine. It has a substantial base in which is cast the shaft bearings insuring accurate and permanent alignment. A separate flange supported by the base is provided for attaching to the drop pipe for the cylinder. The air chamber is fastened to base with bolts through drop pipe flange. Air chamber supports stuffing box and guide rods.

A compression cock allows water to be discharged at the spout, or when closed it may be forced to an elevated tank through pipe attached to the back outlet which is tapped for pipe.

The hand lever is provided for use when the power fails. We can also provide an attachment which enables pump to be operated by windmill. Gears are cut from solid and are well guarded. To operate by hand or windmill, remove the cross head pins and drop the connecting rods out of the way.

To install in well put a length of pipe and rod on cylinder, remove air chamber from base, then place base over well and draw cylinder and rod up through base. Put desired lengths of pipe on cylinder, dropping them down through base and screw pipe flange to last thread of pipe. Pump base will then support entire weight of cylinder and pipe. Remove plunger rod from cross head; connect it to cylinder rod, then place air chamber in position and bolt fast.

Fig. 1717 may be arranged to discharge into underground pipe by using a tee in the drop pipe the required distance below the ground. A shut-off should be placed in the underground pipe to check the flow when desired.

Fig. 1717 may also be equipped with air compressor at \$15.00 extra list, (CIPHER, OILET), as shown on page 247, thus adapting it for use with pneumatic water supply systems. The discharge from Compressor is preferably piped direct into the pneumatic tank. It may, however, be connected to the discharge pipe from pump where the tank is a distance away.

Sizes and Prices

Largest Drop Pipe Inches	Back Outlet Inches	Stroke Inches	Gear Ratio	Tight and Loose Pulleys	Dimensions of Base Inches	Approx. Weight Pounds	Cipher	Price
3	2	6-8-10	6-1	14 x 3	10 x 16	235	OBIT	\$45.00

Capacities

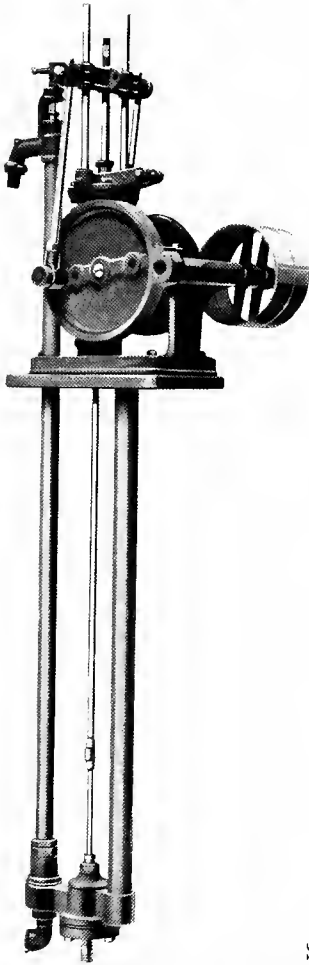
Diameter and Stroke of Cylinder Inches	Gallons per Revolution of Crank Shaft	Maximum Revolutions per Minute	Gallons per Minute	Maximum Lift in Feet Surface of Water to Point of Discharge
2 1/4 x 10	.172	40	7	300
2 3/4 x 10	.257	40	10	190
3 1/4 x 10	.359	40	14	140
4 x 10	.544	40	21.7	90

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Straight-Line" Power Working Head With Underground Discharge

Fig. 1718



This illustration of Fig. 1718 shows a very substantial working head adapted for operation by windmill, gas engine or electric motor. It is good for 500 pounds plunger load. We recommend the use of our Fig. 311 or 324 brass artesian well cylinders with this head.

The discharge can be turned through hydrant spout or into underground pipe as desired, by use of the hydrant valve. Stuffing box is located below frost line and by removing it a 2 $\frac{3}{4}$ -inch plunger can be drawn from well without disturbing any pipe connections.

Drop pipe flanges can be furnished for 3-inch pipe or smaller. Underground discharge may be turned in any direction. The connecting rod pins may be removed from crosshead and the pump can be attached to windmill if desired.

The large pipe air chamber enables pump to discharge into long discharge pipe without undue strain on working parts.

Gears are cut from the solid and are well guarded. Stroke, adjustable, 6, 8 and 10 inches.

When specified, Fig. 1718 will be equipped with air compressor (Cipher, OILET), as shown on page 247, for use in Hydro-Pneumatic systems, at \$15.00 extra list.

Sizes and Prices

Largest Drop Pipe Inches	Undergr'nd Discharge Inches	Stroke Inches	Gear Ratio	Tight and Loose Pulleys	Dimensions of Base Inches	Approx. Weight Pounds	Cipher	Price
3	1 $\frac{1}{2}$	6-8-10	6-1	14 x 3	11 $\frac{1}{2}$ x19 $\frac{1}{2}$	300	OATEN	\$55.00

Capacities

Diameter and Stroke of Cylinder Inches	Gallons per Revolution of Crank Shaft	Maximum Revolutions per Minute	Gallons per Minute	Maximum Lift in Feet Surface of Water to Point of Discharge
2 $\frac{1}{4}$ x 10	.172	40	7	300
2 $\frac{3}{4}$ x 10	.257	40	10	190
3 $\frac{1}{4}$ x 10	.359	40	14	140
4 x 10	.544	40	21.7	90

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming "Straight-Line" Power Working Head

With Underground Discharge
For Wells 300 Feet Deep or Less

Fig. 1719

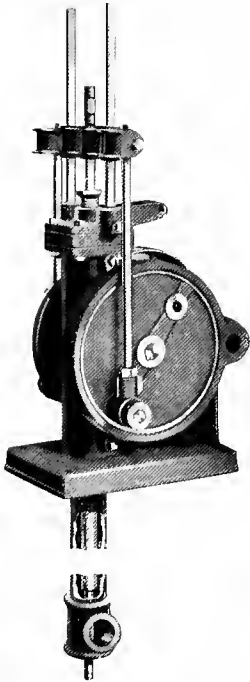


Fig. 1719, as illustrated above, is adapted for use where a discharge spout at the well is not required.

The machine is substantially made with well guarded gears cut from the solid, large drop pipe for 3-inch pipe and 2-inch outlet located three feet below the base. This drop pipe also acts as an air chamber.

The connecting rods may be detached and the head operated by windmill in connection with our windmill slide head, Fig. 390. Windmill connection furnished when specified at \$1.50 extra list.

*The working head may be used without the underground discharge in connection with the stuffing-box heads, Figs. 446 and 449, which can be placed in well or pit and connected to working head by proper length of rod.

When specified, Fig. 1719 will be equipped with air compressor (cipher Oilet) as shown on page 247 for use in Hydro-Pneumatic systems at \$15.00 extra list.

Sizes and Prices

Diameter Drop Pipe Inches	Under-ground Discharge Inches	Stroke Inches	Gear Ratio	Tight and Loose Pulleys	Dimensions of Base Inches	Approx. Weight Pounds	Cipher	*Price
3	2	6-8-10	6-1	14 x 3	10 x 16	215	ODYLE	\$43.00

*Without Set-length and underground discharge, price \$37.00 (Cipher, OVERT); for use with Figs. 446, 449, etc., as explained above.

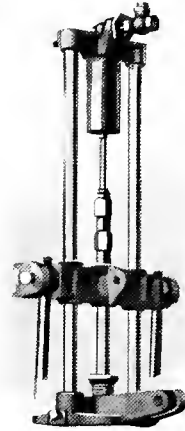
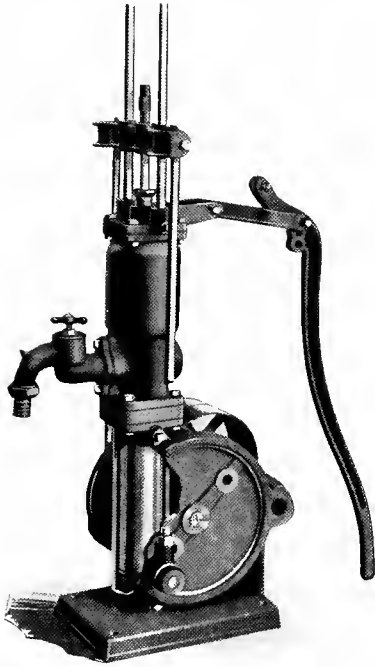
Capacities

Diameter and Stroke of Cylinder Inches	Gallons per Revolution of Crank Shaft	Maximum Revolutions per Minute	Gallons per Minute	Maximum Lift in Feet Surface of Water to Point of Discharge
2 1/4 x 10	.172	40	7	300
2 3/4 x 10	.257	40	10	190
3 1/4 x 10	.359	40	14	140
4 x 10	.544	40	21.7	90



Deming "Straight-Line" Shallow Well Power Pump
For 22 Feet Suction Lift and 125 Feet Discharge Elevation
With Hand Lever

Fig. 1720



*SPECIAL AIR COMPRESSOR
(See description below)

Fig. 1720 was designed for use in shallow wells of 22 feet deep or less. For tank service, creameries, pneumatic water supply systems, and general purposes it will prove a very useful outfit.

The working barrel is of brass and is attached to the flange under air chamber. A compression cock enables spout discharge to be closed and allows water to be forced through back outlet to compression tank, elevated tank or storage reservoir.

The hand lever is provided for use when the power fails. We can also provide an attachment which enables pump to be operated by windmill. Gears are cut from solid and are well guarded.

This is a very substantial and compact pump for gas engine or motor drive. Can also be equipped with windmill attachment if desired.

Should power fail, the connecting rod pins can be removed and the pump operated by hand.

*When specified, we will equip Fig. 1720 with air compressor (Cipher, OILET), as shown on this page—see cut above; for use in Hydro-Pneumatic water supply systems, at \$15.00 extra list.

Sizes and Prices

Diameter Cylinder Inches	Back Outlet Inches	Stroke Inches	Gear Ratio	Tight and Loose Pulleys	Dimensions of Base Inches	Approx. Weight Pounds	Cipher	Price
3 1/2	2	6-8-10	6-1	14 x 3	10 x 16	240	ODOR	\$57.00

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Deep Well Pump Head

For Wells 275 Feet Deep or Less

Fig. 435, with Pitman for Power

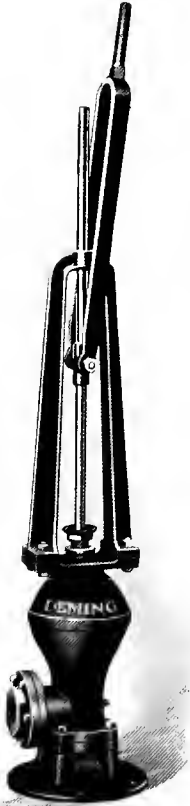


Fig. 435 Working Head is especially adapted for use in mines and for artesian or deep wells.

The plunger rod is of bronze, working through packing gland, and is guided above. To the plunger rod is connected a forked rod with stub end for attaching to power. A flange in the base is threaded for the suction pipe, and the discharge is connected with flange on the side of the air chamber.

We recommend using with this working head our Fig. 311 or Fig. 324 cylinders, listed elsewhere.

These pump heads may be fitted for $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$ or 1-inch rod, or for $\frac{3}{8}$, $\frac{1}{2}$ or $\frac{3}{4}$ -inch pipe sucker rod, but No. 1 is always fitted with $\frac{7}{8}$ -inch rod for $\frac{1}{2}$ -inch pipe, and No. 2 with $1\frac{1}{16}$ -inch rod for $\frac{3}{4}$ -inch pipe, unless otherwise ordered.

In corresponding, give as fully as possible the particulars asked for on page 226, and if pump head only is wanted specify sizes of drop pipe and discharge pipe, and also threads on sucker rod.

Fig. 435, Sizes, Prices, Etc.

No.	Stroke Inches	DIAMETER OF PIPES		*Maximum lift and force with various diameter Cylinders		Weight Pounds	Cipher	Price
		Suction Inches	Discharge Inches	Diam. Cyl. Inches	Lift and Force Feet			
1	10	1 $\frac{1}{4}$ to 3	1 $\frac{1}{4}$ to 3	2 $\frac{3}{4}$	225	95	DECEIT	\$30.00
1	16	1 $\frac{1}{4}$ to 3	1 $\frac{1}{4}$ to 3	2 $\frac{3}{4}$	100	105	DECEITFUL	35.00
2	16	2 to 6	1 $\frac{1}{2}$ to 4	2 $\frac{3}{4}$	275	200	DECEIVE	50.00
2	24	2 to 6	1 $\frac{1}{2}$ to 4	3 $\frac{1}{4}$	200	230	DECENCY	60.00
2	30	2 to 6	1 $\frac{1}{2}$ to 4	3 $\frac{3}{4}$	150	240	DECENT	70.00
2	36	2 to 6	1 $\frac{1}{2}$ to 4	4 $\frac{3}{4}$	100	275	DECIGRAM	80.00

*Vertical distance from surface of the water to point of delivery. For pumping to greater elevations smaller cylinders may be used, and for less elevations larger cylinders.

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Deming Deep Well Pump Heads

With Double Rod Guides and Power Attachment
For Wells 35 to 300 Feet Deep

Fig. 439

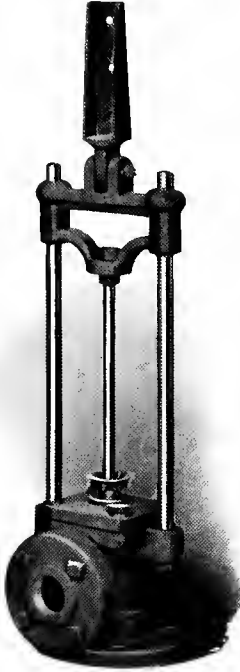
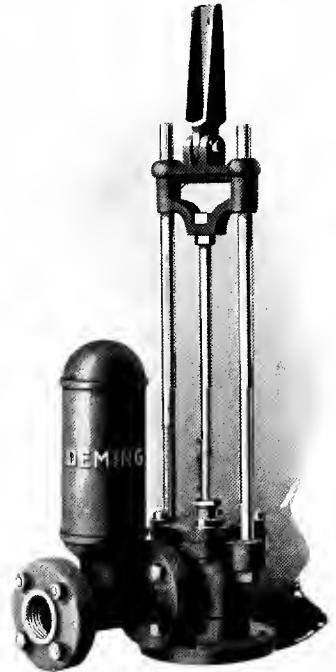


Fig. 1439



These pump heads have crossheads with babbitted bearings working on double heavy steel rod guides. The stuffing-box gland is of brass. The power attachment is hinged to the crosshead and is designed to fit wood rod of windmill, although it can be altered for other style connection when desired.

Fig. 439 has flanged base to bolt to platform or foundation, and the base is threaded for pipe that connects with cylinder. When so ordered, a separate flange threaded for drop pipe, will be furnished at additional cost.

Fig. 1439 is exactly the same as Fig. 439, but with the addition of a large flanged air chamber.

For use with Figs. 439 and 1439 pump heads, we recommend our Figs. 311 and 324 artesian well cylinders, listed elsewhere and connecting with pipe of larger diameter than the cylinder, which will permit the withdrawal of the plunger and valve by the removal of the stuffing-box flange.

Plunger rods are regularly threaded on lower end, $\frac{3}{4}$ -inch U. S. Standard, but will be threaded otherwise if so specified. In ordering always specify size of suction and discharge pipe wanted.

Sizes and Prices

Figures	Stroke Inches	Threaded for Cylinder Pipe Inches	Discharge Inches	Weight in Pounds	Cipher	Price
439	16	4 $\frac{1}{2}$ or less	2 $\frac{1}{2}$ or less	92	DEFAACEMENT	\$20. 00
439	24	4 $\frac{1}{2}$ or less	2 $\frac{1}{2}$ or less	95	DEFIANCE	23. 00
430	30	4 $\frac{1}{2}$ or less	2 $\frac{1}{2}$ or less	100	DEFRAYING	25. 00
1439	16	4 $\frac{1}{2}$ or less	2 $\frac{1}{2}$ or less	167	DEFT	30. 00
1439	24	4 $\frac{1}{2}$ or less	2 $\frac{1}{2}$ or less	170	DEIFY	33. 00
1439	30	4 $\frac{1}{2}$ or less	2 $\frac{1}{2}$ or less	175	DEIST	35. 00

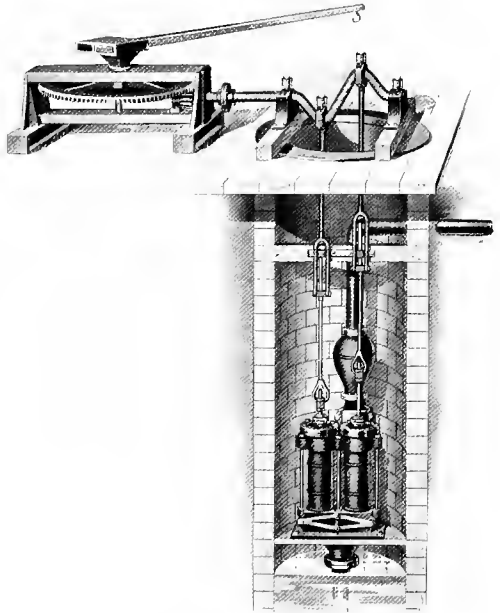
Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Special Duplex Pump for Deep Wells

Combined with Horse Power
Will Lift and Force 150 Feet

Fig. 703



This horse power is very substantial. It has heavy shafts, also babbitted bearings. The master-wheel has 84 teeth, and the pinion 14. Lever is 10 feet long. The horse power without the pump is designated as Fig. 700.

Either one or two levers may be used, although we furnish regularly but one with each outfit.

The illustration shows Fig. 703 with wrought iron crank, slings, guides, etc. The prices quoted below include the outfit complete with rods, etc., for wells 30 feet deep, but do not include suction or discharge pipe. Roller guides for the rods to work through should be fastened to the woodwork about every 12 feet. See Fig. 389 on page 114.

When the outfit is wanted for wells more than 30 feet deep, we supply the rods and roller guides at the extra prices per foot as given below.

If desired we can furnish the cylinder separately. It is then designated as Fig. 348.

Sizes and Prices

Diameter Cylinder Inches	Stroke Inches	Capacity per Revolution Gallons	Suction and Discharge Fitt'd for Pipe Inches	Deepest Wells to which adapted Feet	Weights Pounds	BRASS-LINED CYLINDER	
						Cipher	Price
2½	10	.42	1½	150	1200	OBLITERATE	\$220.00
3	10	.61	2	100	1250	OBOE	225.00
3½	10	.83	2½	80	1300	OBROGATE	250.00
4	10	1.09	2½	60	1350	OBSERATE	275.00
5	10	1.70	3	40	1450	OBTAINING	325.00
6	10	2.45	3½	30	1500	OBTUSE	375.00

For extra attachments for two horses add \$10.00 to lists above.

Extra list per foot for Rods, for wells over 30 feet deep:

For 2½-inch Pump.	\$0.80
For 3 -inch Pump. . . . .	.80
For 3½-inch Pump.	1.00
For 4 -inch Pump.	1.20
For 5 -inch Pump.	1.60
For 6 -inch Pump.	2.00

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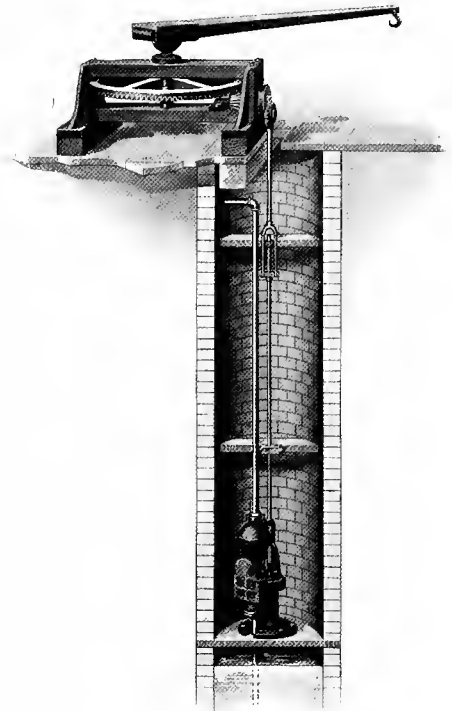
Deming Horse Power and Double-Acting Pump

With Connecting Rod, Guides, Etc.

Will Lift and Force 100 Feet

Fig. 702

Fig. 702 represents our Double-Acting Force Pump, Fig. 491, attached to Horse Power. These pumping outfits can be used for wells up to 50 feet deep. We furnish the Power, Pump, Connecting Rod, Guides, etc., complete, as shown in cut, for wells 30 feet deep, at prices given below. Prices do not include any suction or delivery pipe. When these pumps are wanted for wells over 30 feet deep, we furnish them for any depth at extra prices per foot as given below. These Powers are for one or two horses, and are furnished for one horse unless otherwise ordered. When wanted for two horses, we furnish them with extra poles, etc., as listed. Roller guides, our Fig. 389, shown on page 114, should be used every 8 feet.



The horse walking at an ordinary speed will give about 20 revolutions of the crank shaft per minute.

Sizes and Prices

Diameter Cylinder Inches	Stroke Inches	Capacity per Revolution Gallons	Suction and Discharge Fitted for Pipe Inches	Weights Pounds	BRASS-LINED CYLINDER	
					Cipher	Price
3	10	.61	1½	1000	OAFISH	\$145. 00
4	10	1. 08	2	1075	OBLATE	170. 00
5	10	1. 70	2½	1200	OPINICUS	190. 00

Extra attachments for two horses, add \$10.00 to lists above.

Extra list per foot for Rods, for Wells over 30 feet deep:

For 3-inch Pump.	\$0. 60
For 4-inch Pump.	1. 00
For 5-inch Pump.	1. 25

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Deep Well Horse Power Pumping Outfit

With Fig. 439 Head and Fig. 319 Cylinder
Will Lift and Force 50 to 150 Feet

Fig. 704

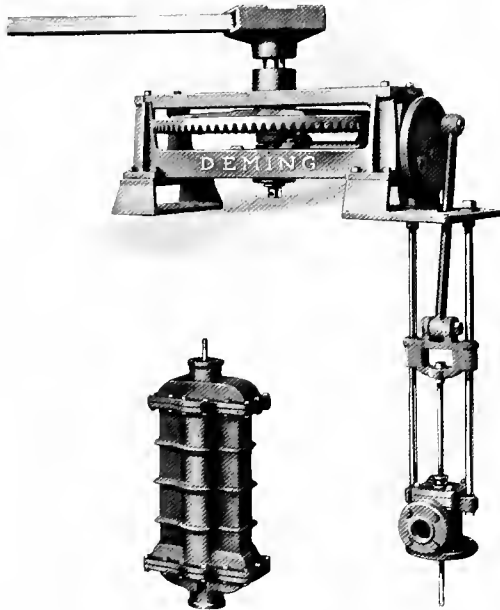


Fig. 704 is fully illustrated above. It is the simplest and most satisfactory deep well horse power pumping outfit manufactured. It may be erected over a well without trouble. Fig. 319 double-acting iron cylinder is used in connection with heavy horse-power and working head suspended from a substantial sub-base.

The complete outfits, LESS PIPE AND PLUNGER ROD, are listed below, with depth of well for which each is adapted. Pump makes 20 revolutions per minute at ordinary speed of horse.

Sizes and Prices

Diameter Cylinder Inches	Stroke Inches	Capacity per Revolution Gallons	Suction and Discharge Fitt'd for Pipe Inches	Depth Well Adapted for Feet	Weights Pounds	Cipher	Price
2 $\frac{1}{4}$	7	.24	2	100	975	HOBBY	\$110.00
2 $\frac{1}{4}$	10	.34	2	100	975	HOBBLE	112.00
3	7	.43	2	75	1000	HOBIT	112.00
3	10	.61	2	75	1050	HOBNOB	116.00
4	7	.76	2 $\frac{1}{2}$	50	1075	HOBBIST	114.00
4	10	1.08	2 $\frac{1}{2}$	50	1100	HOBIER	118.00

Above outfits are for one horse. For two horses add \$10.00 to above lists.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



DEMING HYDRO-PNEUMATIC WATER SYSTEMS

INCLUDING PUMP

AND

COMPLETE EQUIPMENT

FOR SUPPLYING WATER TO
FARM HOMES, SUBURBAN RESI-
DENCES, COUNTRY CLUBS, SUM-
MER HOMES, GREENHOUSES,
ETC., THE TANK PRESSURE IN
MANY CASES BEING AUTOMATI-
CALLY CONTROLLED, AND THE
PUMP OPERATED BY ELECTRIC
MOTOR, GASOLINE ENGINE
OR BY HAND





Residence of Mr. Anton G. Hodenpfl, Locust Valley, L. I., in which a Deming Water System of large capacity is installed

Advantages of the Deming Hydro-Pneumatic System of Water Supply "The Greatest Need in the Farm Home"

"What one change or improvement would be of the greatest benefit to the home, or what one would you yourself rather have," was the question addressed recently to a large list of farmers' wives by the Missouri State Department of Agriculture.

FIFTY-THREE PER CENT of the replies conceded that "the greatest need in the farm home is some system of running water." To quote the words of the Missouri Secretary of Agriculture, "The kitchen sink is still a luxury to too many farmers' wives, although it should be considered a NECESSITY. Running water means less need for hired help, fewer doctor's bills and a reduction in the daily work for all."

With a Deming Water System, it is possible to have a plentiful supply of hot or cold water, ready to gush forth UNDER STRONG PRESSURE, at a turn of the faucet. The conveniences of city life, such as bathroom, kitchen sink, laundry, etc., are made easily available.

Adequate Fire Protection Reduces Insurance Premiums

By a system of piping, the water can be brought to the barn, milk house, garage, pasture, feed lot, etc. Outside hose connections for lawn sprinkling and fire protection can be arranged at small expense. It is conceded by experts who make a study of fire protection that the most efficient protection for isolated buildings that do not have the advantage of a city water-works is to have the storage of water, however small, under sufficient pressure to reach all parts of the building. In this way the water can be turned on the fire before it has gotten beyond control. If fire is discovered at an early period and water can be obtained without delay, it will be easily extinguished. On the other hand, if water has to be carried from a distance, the chances of saving the property from destruction will be very much reduced.



The Old Way

Automatic Control

In fact, the uses to which such a "city water-works in the country" may be adapted, are limited

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HAND AND POWER PUMPS FOR ALL USES



Deming Water Systems are Indispensable for Dairy Farms. The Stock on Modern Dairy Farms are Supplied with Running Water

only by the requirements and the ingenuity of the owner. When it is possible to use an electric motor to drive the pump, the pressure may be controlled by an automatic switch which stops and starts the motor when the pressure rises or falls beyond a predetermined point. In most cases the minimum and maximum pressures are 45 and 60 pounds, respectively. An automatic cutoff is also furnished with gasoline engine driven outfits when specified.

“Aeration” Helps Prevent Disease

Since the water is stored in substantial tanks underground, it is kept at a uniform temperature, free from impure air, dust, vermin or other contaminating matter. In artesian well systems the water need never reach the outside air or light until used.

Typhoid fever and other serious diseases are directly traceable to impure water. If desired, the air and water as they enter the tank, can be filtered to insure absolute purity. AERATION (the mixture of the water with the air) helps to cleanse and purify the water and makes it very much safer and better for drinking purposes. As the water and air both remain under pressure while the water is in storage, the aeration is complete and effectual.

Efficient — Simple — Economical

In the Deming System there is no elevated tank to freeze or to topple over in a storm — no upstairs tank to leak and flood your home — no frozen pipes in winter — no mosquito breeding, stagnant, lukewarm water in summer — but ALWAYS an ample supply of pure water of the same temperature, under strong pressure, EVERY DAY IN THE YEAR.

Pressure tanks cost very little more than elevated tanks of the same capacity, and the service they render is so far beyond that of the elevated tank that the slight difference in cost is of no consequence.

When city water pressure is not obtainable or where an individual water system can supply water at less expense than the city water-works, there is no system which can compete with the Deming System in point of efficiency, simplicity and economy.

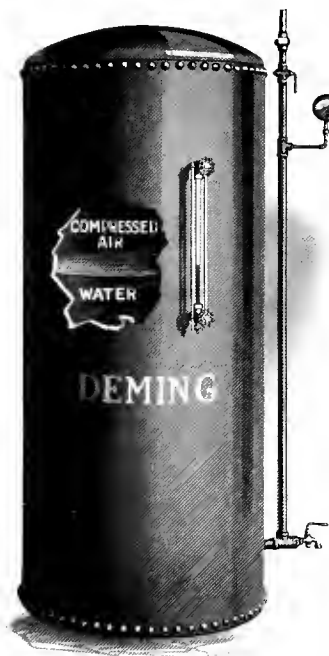


The “Deming” Way

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Method of Operating the Deming Hydro-Pneumatic Water System



In operation, our system is very simple and easily understood. It requires no more care than the most ordinary water pump. The outfits consist primarily of a closed cylindrical tank and a pump for raising the water from the source of supply and forcing it into the tank, the discharge pipe from the pump being connected to the bottom of the tank. There are also included the necessary valves, gauges, etc., as explained on the succeeding pages.

Air Pressure Acts Like a Wound-Up Spring

The tank (when said to be empty) contains air at atmospheric pressure, which is 14 pounds to the square inch. The pumping of water into the bottom of the tank will compress the air after the opening in the tank has been closed and, as the air is lighter than water, it is compressed into the space above the water.

As the water level rises at each stroke of the pump, the air becomes compressed more and more in the top of the tank, and finally reaches a desired point of compression where it is exerting upon the water in the tank, a very strong pressure which pushes the water out from the tank and through the pipes to any part of the house or grounds, where it is then ready to flow from the faucet. Air is very elastic and acts much like a wound-up spring. Its force becomes less when the air space expands and the volume of water decreases.

Air May Be Pumped With the Water

Illustrating how, when water is pumped into tank, the air is forced to the top of tank, the compression becoming greater as the water rises in the tank. The correct proportion is one-third air and two-thirds water.

full of water, 28 pounds; three-quarters full of water, 45 pounds, etc. By increasing or decreasing the amount of the air put into the tank and also the pressure, the Deming System will meet the requirements of various locations requiring either a high or low pressure. Each Deming System is equipped with an air charging device so that additional air can be pumped into the tank at each stroke of the pump if desired. No separate air compressor is necessary.

No Complicated Parts

It will thus be seen that there is nothing mysterious about our system, nor are there any complicated parts to get out of order and require ceaseless attention. With the hand operated systems, it will probably be necessary to pump water into the tank once every day or two. However, if electrically driven and automatically controlled, the outfit will require no attention for months at a time, except for an occasional oiling.

Deming Tanks Are Carefully Tested

It is absolutely necessary that the tank be not only water-tight, but also it must be AIR-TIGHT, so that a "bottle-tight," thoroughly tested tank is essential. Deming Hydro-Pneumatic tanks are tested under 125 pounds pressure and are absolutely guaranteed to perform the service for which they are recommended. There is a great deal of difference between the ordinary tank and the hydro-pneumatic tank used with the Deming Water Systems. The ordinary tank is not built as carefully and is liable to leak air. The Deming Hydro-Pneumatic tank is more carefully made and tested, and will not leak. All Deming tanks are painted inside with special anti-rust paint.

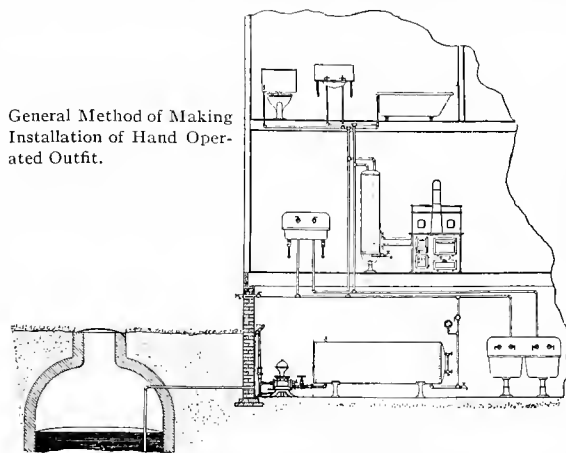
Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



HAND AND POWER PUMPS FOR ALL USES



General Method of Making Installation of Hand Operated Outfit.



highest building; if the water is to be furnished to stock; power available to drive the pump — whether hand, windmill, gasoline engine or electric motor. Also send a rough sketch of the general layout. With this information we can submit an accurate estimate and recommendation.

Quantity of Water Per Day

The following data will be useful in determining the average quantity of water required per day of 24 hours. Each member of the family for all purposes, including kitchen, bath, water closet, laundry, etc., will require 25 gallons; each horse, 10 gallons; each cow, 10 gallons; each hog, 2 gallons.

We will be glad to give our advice concerning any installation which it is desired to make, but we should have available all the information possible, such as the source of the water supply; depth of well, distance from the surface of the ground to the water; how many people will use the water each day; the height of the

Note Carefully

To secure the best results when installing the outfit, a reliable plumber, or some one experienced in such work should be secured.

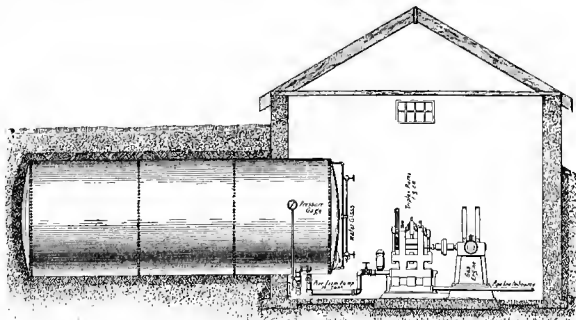
With each motor driven outfit is included an automatic pressure regulator which starts and stops the motor when the pressure in the tank lowers or rises beyond a predetermined point. Gasoline engine driven outfits are supplied with an automatic cutoff, which cuts out the battery current when the pressure rises to a specified point.

IN THE PRICES GIVEN ON DEMING OUTFITS, THE SUCKER ROD, PIPE AND PIPE FITTINGS SUCH AS ELLS, TEES, UNIONS, ETC., ARE NOT INCLUDED, SINCE EACH INSTALLATION IS AS A RULE, DIFFERENTLY SITUATED AND REQUIRES THEREFORE, DIFFERENT FITTINGS AND VARYING LENGTHS OF PIPE.

Hand-holes and man-holes in tank ARE FURNISHED ONLY WHEN SPECIFIED, but we recommend that a hand-hole at least be included. For prices see page on which tanks are listed. The water capacity of a tank is approximately two-thirds the total capacity.

In the motor driven outfits, A. C., single-phase, 60-cycle, 110-220-volt motors are regular. We can however, supply A. C. two or three-phase or D. C. motors when required.

It should not be inferred that we make only the outfits listed in this Catalogue. With our large line of hand and power pumps, many different combinations are possible. The outfits which are here listed, should be understood to represent typical combinations which can however, be varied to suit the requirements.



General Method of Making Installation of Power Operated Systems

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Double-Acting House Force Pumps

For Hydro-Pneumatic Service

For Wells and Cisterns 25 Feet Deep or Less



Fig. 608 $\frac{1}{2}$, with Air Cock

These pumps discharge water on both strokes. Access to the valves is gained by removing two bolts, one on each end of the pump. Figs. 608 $\frac{1}{2}$ and 606 have bronze wing valves and bronze valve seats, ground together.

FIG. 608 $\frac{1}{2}$ is fitted with a small check valve and air cock. By adjusting this cock, the amount of air to be pumped into the tank may be controlled. If water only is to be pumped, the air cock should be closed. Fig. 608 $\frac{1}{2}$ is for use only where the supply is lower than the pump.

FIG. 606 has an internal air cylinder which is connected directly to the air chamber or compression tank as desired, by an air discharge pipe. With this device, air is not taken directly

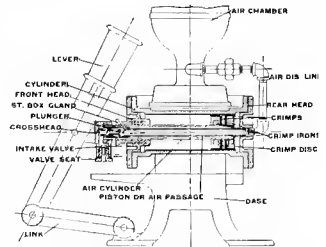


Fig. 606, with Patented Internal Air Cylinder

into the suction; therefore the efficiency of the pump is not impaired. The piston rod is hollow and forms the internal air cylinder. If water only is desired, close the air cock on plunger rod. THIS INTERNAL AIR CYLINDER IS FULLY COVERED BY OUR PATENTS. The view of this pump in section shows clearly the method of operating.

FIG. 606 IS ESPECIALLY ADAPTED FOR USE WHERE THE SUPPLY IS HIGHER THAN THE PUMP, but can also be used to good advantage where the supply is lower than the pump.

FIG. 606 is, without doubt, the most efficient hand pump on the market for hydro-pneumatic systems.



Section of Fig. 606 (Patented)

Sizes and Prices

No.	Size Cylinder Inches	Stroke Inches	Suction Inches	Discharge Inches	FIG. 608 $\frac{1}{2}$, WITH BRASS-LINED CYLINDER			FIG. 606, WITH BRASS-LINED CYLINDER		
					Cipher	Price	Weight Pounds	Cipher	Price	Weight Pounds
1	2 $\frac{1}{2}$	4	1 $\frac{1}{4}$	1	FRANKING	\$19.00	55	FAITH	\$25.00	56

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



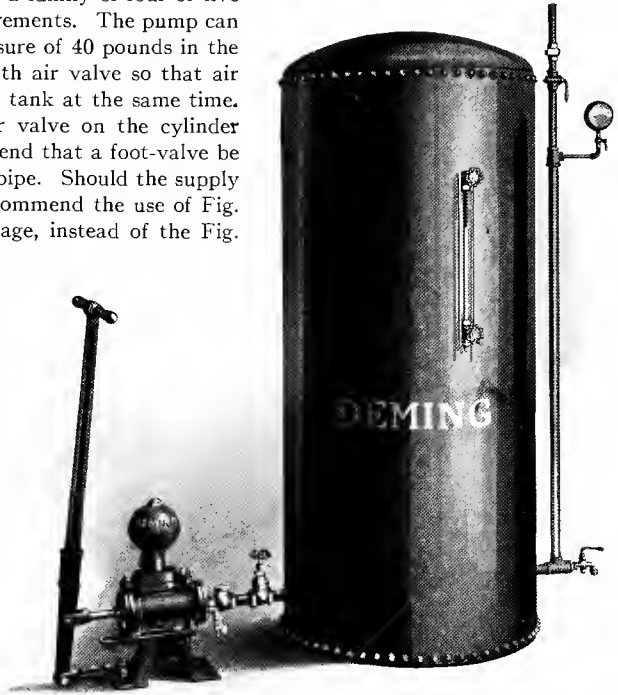
Deming "Climax" Water System No. 2001

For Wells and Cisterns 25 Feet Deep or Less

With the "Climax" System, sufficient water may be stored at one pumping to last a family of four or five about one day for ordinary requirements. The pump can be easily operated against a pressure of 40 pounds in the tank. The pump is provided with air valve so that air and water can be forced into the tank at the same time. If water only is desired, the air valve on the cylinder head can be closed. We recommend that a foot-valve be placed on the end of the suction pipe. Should the supply be higher than the pump, we recommend the use of Fig. 606, described on the opposite page, instead of the Fig. 608½ pump, listed below.

Equipment Specifications of System No. 2001

- One 30-in. x 6-ft. vertical tank.
- One Fig. 608½ "Climax" double-acting pump with brass-lined cylinder. See opposite page.
- One Fig. 904 1-in. check valve.
- One Fig. 900 1-in. globe valve.
- One Fig. 913 1-in. stop and waste valve.
- One Fig. 688 pressure gauge.
- One Fig. 917 ½-in. hose bibb.
- One glass water gauge.



Sizes, Capacities, Prices, Etc.

PUMP			TANK			Complete Weight of Outfit Pounds	Cipher	Price
Diameter of Cylinder Inches	Stroke Inches	Capacity per Minute 30 Strokes Gallons	Capacity of 30-in. x 6-ft. Tank Gallons	Water 30-in. x 6-ft. Tank Gallons	Weight of Tank Pounds			
2½	4	5	220	150	575	650	SERF	\$85.00

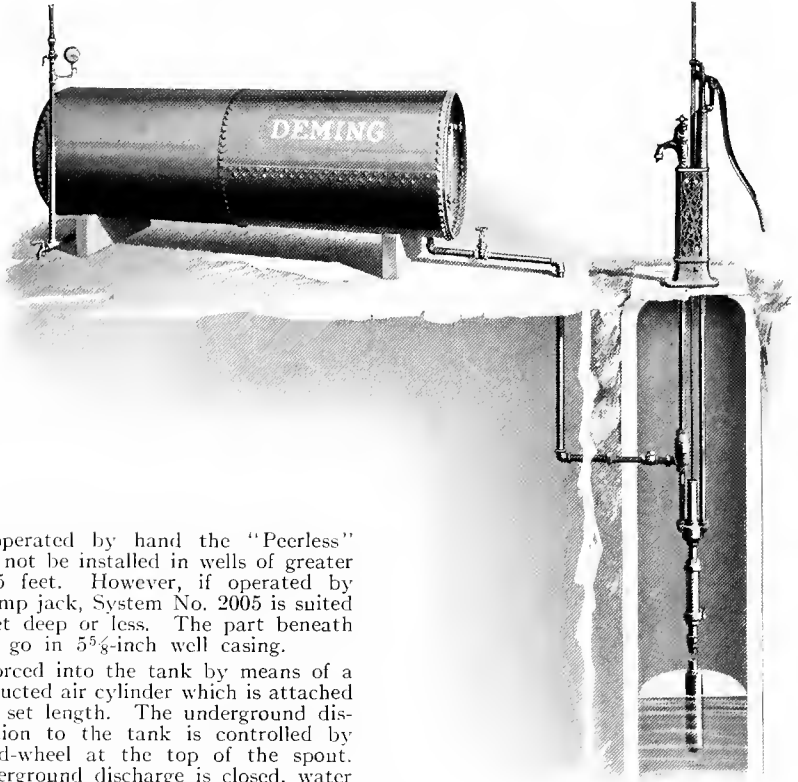
Variations of the "Climax" Outfit

- System No. 2002, with 30-in. x 8-ft. HORIZONTAL tank (total capacity, 295 gallons), otherwise same as above, (Cipher, SERGE).....\$100.00
 - System No. 2003, with 30-in. x 6-ft. VERTICAL tank (total capacity, 220 gallons), and Fig. 606 pump, as described on preceding page; otherwise the same as System No. 2001, (Cipher, SERIAL)..... 90.00
 - System No. 2004, with 30-in. x 8-ft. HORIZONTAL tank (total capacity, 295 gallons), otherwise the same as System No. 2003, (Cipher, SERIES)..... 105.00
- Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342*



Deming "Peerless" Water System No. 2005

With Special Air Cylinder



When operated by hand the "Peerless" System should not be installed in wells of greater depth than 35 feet. However, if operated by windmill or pump jack, System No. 2005 is suited to wells 75 feet deep or less. The part beneath the pump will go in 5³/₈-inch well casing.

Air is forced into the tank by means of a specially constructed air cylinder which is attached just below the set length. The underground discharge connection to the tank is controlled by turning a hand-wheel at the top of the spout. When the underground discharge is closed, water may be pumped out of the spout.

Equipment Specifications of System No. 2005

- One 30-in. x 8-ft. horizontal tank.
- One Fig. 453 No. 4 "Peerless" windmill double-acting force pump, with underground discharge and Fig. 322, 3-in. x 12-in. brass tube cylinder.
- One Fig. 306 air cylinder, 1¹/₄ in. x 7 in.

- One Fig. 904 1-in. check valve.
- One Fig. 900 1-in. globe valve.
- One Fig. 913 1-in. stop and waste cock.
- One Fig. 688 pressure gauge.
- One Fig. 917 1/2-in. hose bibb.
- One water gauge.

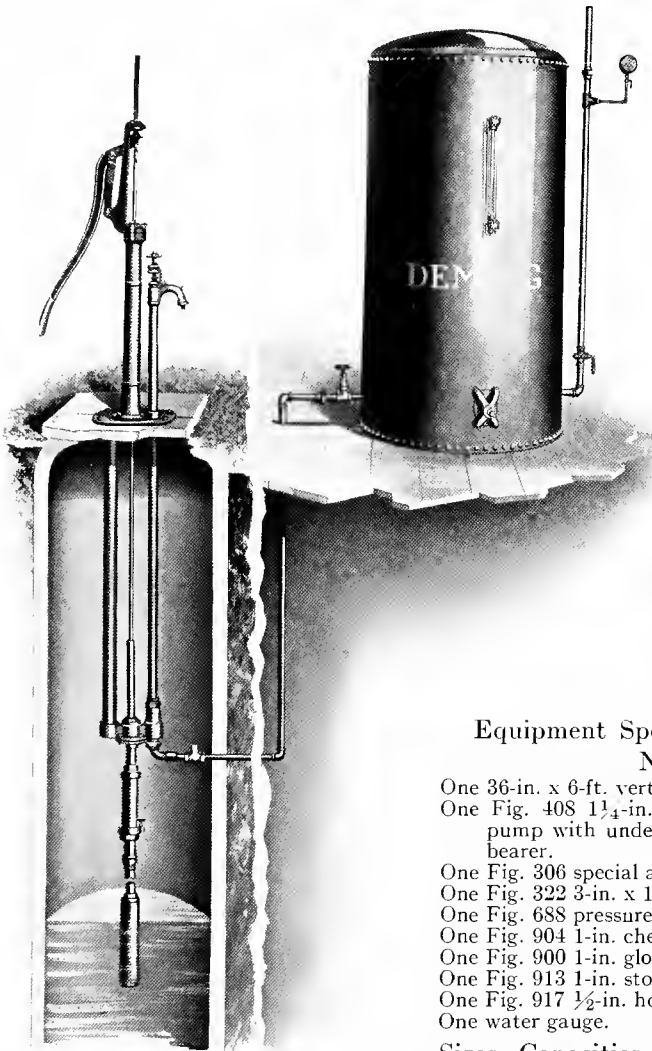
Sizes, Capacities, Prices, Etc.

P U M P						T A N K				Weight of Complete Outfit Lbs.	Cipher	Price
Diam. of Lower Cylinder Inches	Stroke Inches	Lower Cylinder will go in Wells Inches	Under-ground Discharge Fitted for Pipe Inches	Suction Fitted for Pipe Inches	Weight Lbs.	Capacity 30" x 8' Tank Gallons	Water Capacity 30" x 8' Tank Gallons	Weight of Tank Lbs.				
3	6	3 1/2	1	1 1/4	116	295	198	725	975	SENS	\$110.00	

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Pioneer" Water System No. 2006
With Special Air Cylinder



Connection to the tank is made by means of the underground discharge. When operated by hand, this system is suited to wells 35 feet deep or less, but if driven by windmill or pump jack, it can be used in wells 75 feet deep or less. A hand-wheel over the spout controls the distributing valve so that water may be forced into the tank, or pumped out of the spout, as desired. The stock is the same diameter between the two rings, 3 inches, so that all makes of jacks can be used. The union elbow coupling for underground connection can be turned to suit the direction of the pipe. The bushing for the guide rod is RENEWABLE.

A specially constructed air cylinder which is attached just below the set length, furnishes the necessary air to operate the system.

Equipment Specifications of System
No. 2006

- One 36-in. x 6-ft. vertical tank.
- One Fig. 408 1¼-in. x adjustable, windmill force pump with underground discharge and patent bearer.
- One Fig. 306 special air cylinder, 1¼ in. x 14 in.
- One Fig. 322 3-in. x 18 in. brass cylinder.
- One Fig. 688 pressure gauge.
- One Fig. 904 1-in. check valve.
- One Fig. 900 1-in. globe valve.
- One Fig. 913 1-in. stop and waste cock.
- One Fig. 917 ½-in. hose bibb.
- One water gauge.

Sizes, Capacities, Prices, Etc.

PUMP					TANK			Weight of Complete Outfit Lbs.	Cipher	Price
Diam. Lower Cylinder Inches	Stroke Inches	Underground Discharge Fitted for Pipe Inch	Suction Fitted for Pipe Inches	Weight Lbs.	Capacity 36" x 6' Tank Gallons	Water Capacity of 36" x 6' Tank Gallons	Weight of Tank Lbs.			
3	Adjustable 6, 8 or 10	1	1¼	145	315	210	735	1000	SEPIA	\$105.00

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming "Atlas" Double-Acting Power Pump

For Wells and Cisterns 25 Feet Deep or Less

Fig. 691

The "Atlas" pump, Fig. 691, is especially designed for use with hydro-pneumatic water systems. On the following pages are several water systems representing the "Atlas" pump in conjunction with gasoline engine, electric motor and vertical and horizontal tanks. Fig. 691 is also well adapted for open tank supply and for pumping water for any service where the pressure does not exceed 75 lbs. The "Atlas" pump, although moderate in price, is thoroughly reliable.

Specifications

CYLINDER: Brass lined. Cast in one piece with base.

GEARING: Machine cut and fully guarded. Ratio 5 to 1.

BEARINGS: Babbitt lined and provided with large oil pockets.

PISTON: Furnished with cup packing.

PISTON ROD: Drawn brass.

CROSSHEAD: Guided by two rigid steel guide rods.

VALVES: All valves are easily accessible without disturbing pipe connections.

AIR CHARGING: Size 2 1/4-in. x 5-in. is furnished REGULARLY with air snifter. See illustration at top of opposite page.

A SPECIAL AIR COMPRESSOR will be supplied (see illustration at bottom of opposite page) when desired, at extra price, as listed below.

Type "B" Drive (Cipher, "TYPEB"). Includes cast iron sub-base, intermediate gear and rawhide pinion for connecting electric motor.

Type "C" Drive (Cipher, "TYPEC"). Same as Type "CI" Drive with addition of cast iron sub-base under pump and motor. Belt is included. Motor furnished at extra price.

Type "CI" Drive (Cipher, "TYPECI"). Includes tight pulley, 20 inches diameter or smaller, with belt tightener of gravity type for driving by electric motor or gas engine with short belt pulley centers. Larger diameter pulley supplied at extra price. Belt is not included.

Type "G" Drive (Cipher, "TYPEG"). Includes a horizontal or vertical water-cooled, or a vertical air-cooled, gasoline engine mounted on a cast iron sub-base with pump and connected by gearing. See below for prices of outfits with different styles of engines.

HAND OPERATION: Size 2 1/4 x 5 is furnished, when desired, with lever, link and attachments as illustrated, for operating by hand in case of emergency. (Cipher, "HANDOP.")

Capacities, Sizes, Prices, Etc.

PISTONS		Revs. per Minute	Gallons per Min. at Maximum Speed	Maximum Working Pressure Pounds	DIAMETER OF PIPES		Tight and Loose Pulleys	*Cipher	PRICES		
Diam. Inches	Stroke Inches				Suction Inches	Discharge Inches			With Standard Pulleys	Extra for Hand Operating Attachments	Extra for Air Compressor
2 1/4	5	60	9.6	75	1 1/4	1	8 x 2 1/2	FLAUNT	\$40.00	\$4.00	\$10.00
3	6	55	19.2	75	2	1 1/2	14 x 3	FLAG	70.00	.....	12.00
4	8	50	42.5	75	2 1/2	2	16 x 4	FLAGGING	95.00	.....	15.00

PISTONS		PRICES CONTINUED								
Diam. Inches	Stroke Inches	MOTOR OR ENGINE NOT INCLUDED			WITH "G" DRIVE — ENGINE INCLUDED					
		With "B" Drive	With "C" Drive	With "CI" Drive	Horizontal Engine Water-cooled		Vertical Engine Water-cooled		Vertical Engine Air-cooled	
					H. P.	Price	H. P.	Price	H. P.	Price
2 1/4	5	\$ 75.00	\$ 70.00	\$ 45.00	1 1/2	\$175.00	1 1/2	\$175.00	1 1/2	\$190.00
3	6	110.00	105.00	78.00	2 1/2	260.00	3	255.00	2 1/2	280.00
4	8	145.00	140.00	105.00	4	375.00	4	335.00	3 1/2	360.00

*When telegraphing with reference to either of the types of drive, place the cipher word representing the type of drive immediately following the cipher word for the standard pump.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Atlas" Double-Acting Power Piston Pump
For Hydro-Pneumatic Water Systems

Fig. 691

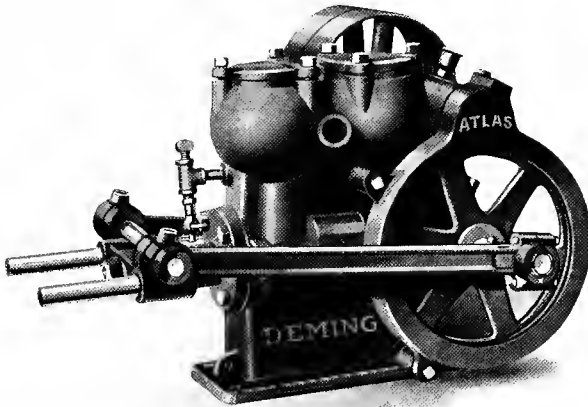


Fig. 691, with Tight and Loose Pulleys, also Air Charging Device

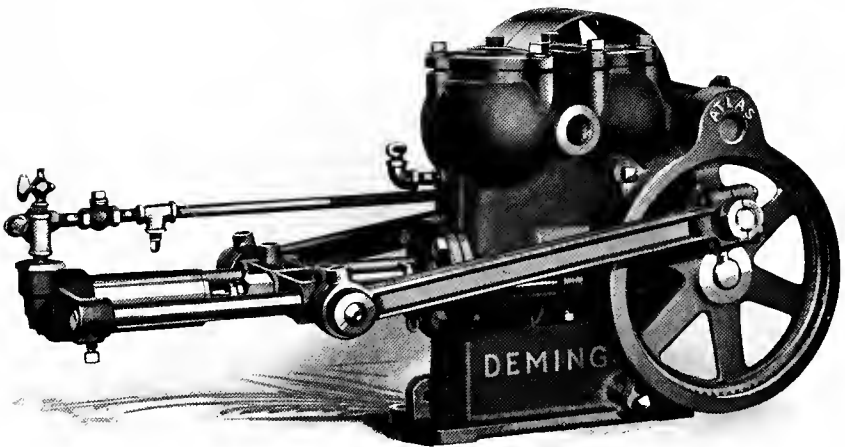


Fig. 691, with Air Compressor

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



THE DEMING COMPANY, SALEM, OHIO, U. S. A.



Deming "Atlas" Double-Acting Power Piston Pump For Hydro-Pneumatic Water Systems

Fig. 691

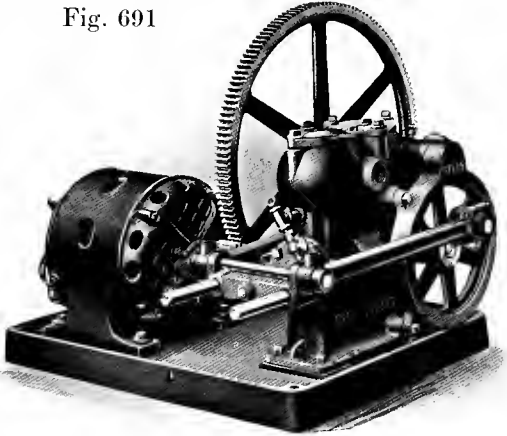


Fig. 691, with Type "B" Drive and
Electric Motor

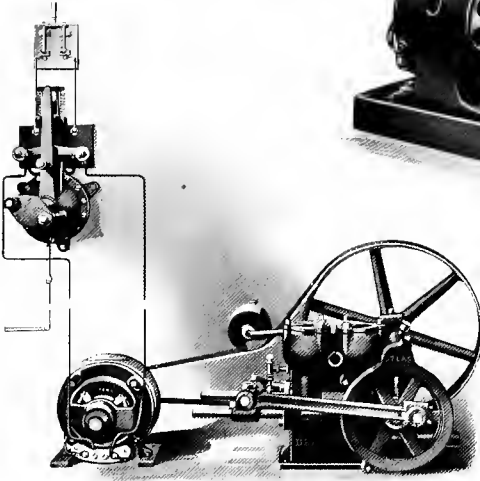


Fig. 691, with Type "CI" Drive,
also Motor and Automatic Control

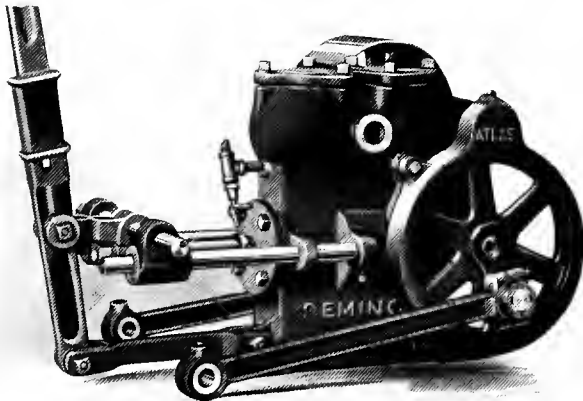


Fig. 691 with Pulleys and Hand Attachment

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Atlas" Double-Acting Power Piston Pump
For Hydro-Pneumatic Water Systems

Fig. 691

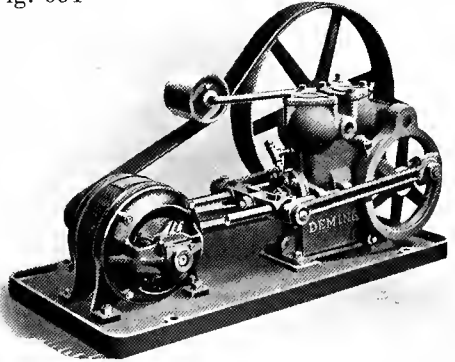


Fig. 691 with Type "C" Drive, also Motor

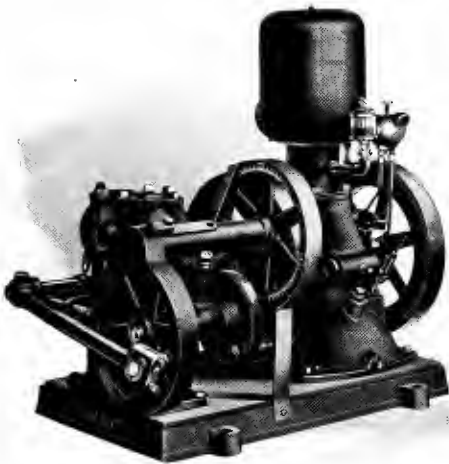


Fig. 691 with Type "G" Drive and Water Cooled Vertical Engine

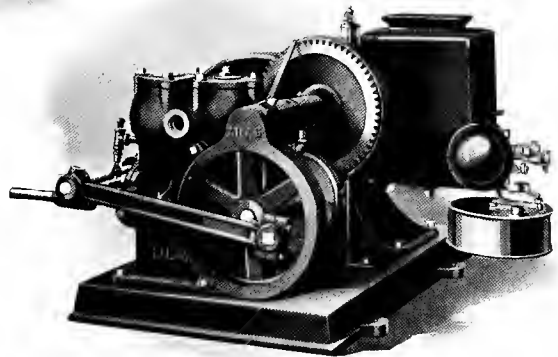


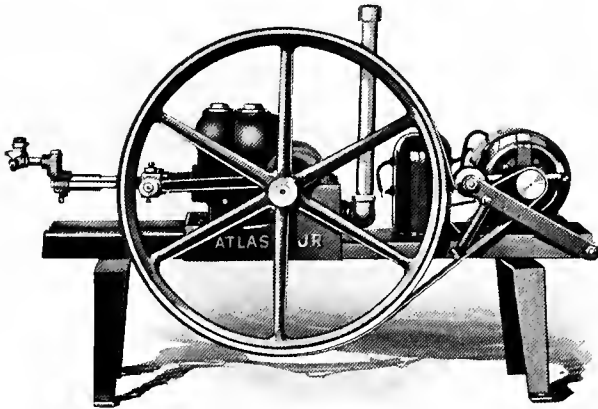
Fig. 691 with "Type "G" Drive and Water Cooled Horizontal Engine

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



“Atlas Junior” Automatic Electric House Pumping Outfit
For Supplying the Requirements of Bathroom, Laundry and Kitchen

Fig. 1691



For pumping soft water to supply the requirements of bathroom, laundry and kitchen in connection with a pressure tank, this is an especially good pumping unit. In many cases the city water pressure is insufficient to operate a water motor, and a pump of this type is much to be preferred. This “Atlas Junior” pump is less expensive to operate than the water motor and will provide a better and more reliable pressure. In fact the “Atlas Junior” pump completely fills the demand for a high-grade, noiseless, efficient, reliable and at the same time moderate-priced pumping unit for handling hard or soft water, wherever electric power is available.

Based on an electric light rate of ten cents per kilowatt hour, the average cost of pumping water will be about eight to ten cents per one thousand gallons.

A water motor consumes from two to five gallons of city water to pump one gallon of cistern water, according to the constancy of the city pressure and efficiency of the water motor. Not being connected to the city mains, our “Atlas Junior” pump will not give trouble because of lime-corroded valves as is often the case with the water motor.

The “Atlas Junior” pump is in general modeled after the “Atlas,” described on the preceding pages, except that it is much smaller and is equipped with brass valve chamber caps which are screwed in. It also has a special independent air cylinder which insures a positive supply of air since the air is pumped directly into the tank and is not taken through the valves of the pump. It is regularly fitted with a reliable automatic electric switch which respectively starts or stops the pump when the pressure in the tank lowers or rises to a predetermined point.

The price below includes the double-acting pump, 1/6 horse-power, A. C., single-phase motor, pump stand, automatic controller, 20-in. x 1 1/4-in. pulley, 6 ft. of belting and spring belt tightener, all complete as illustrated above. The “Atlas Junior” requires very little attention. If water only is to be pumped, open the air cock on the special air cylinder.

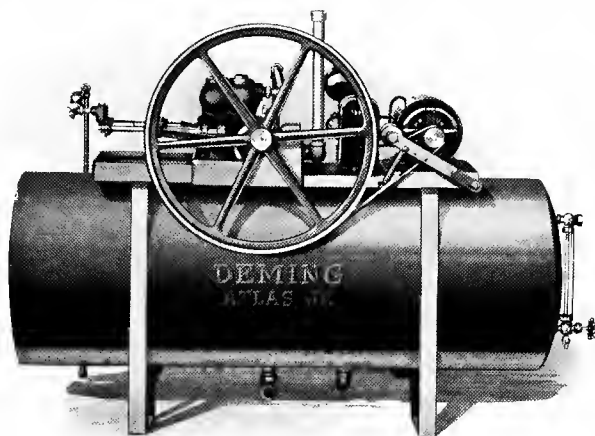
Prices, Capacities, Etc.

Diam. of Cyl.	Stroke Inches	DIAMETER OF PIPES		Capacity per Hour Gallons	Maximum Pressure Pounds	Shipping Weight Pounds	Cipher	PRICE	
		Suction Inches	Discharge Inches					With 1/6 H.P. Single-Phase 60-Cycle 110-220-Volt A. C. Motor	Furnished with A. C., Two or Three-Phase Motor or D. C. Motor, At Same Price
1 1/4	2	3/4	3/4	180	75	125	SCALL	\$150.00	

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Atlas Junior" Water System No. 2007 With 180 Gallon Pump, 53 Gallon Tank and 1/6 H. P. Motor



This is a self-contained outfit, the pump, motor and electrical appliances all being mounted upon an 18-in. x 48-in. horizontal tank, thereby securing economy of space, and also keeping the different parts free from contact with the damp floors and walls of the cellar.

In the construction of System No. 2007, we have used the "Atlas Junior" pumping unit, having added a 53-gallon horizontal tank. If lack of floor space will not permit the use of this horizontal tank, we can furnish a vertical tank of any desired capacity.

An adjustable spring belt tightener takes up the slack in the belt and prevents slippage. The usual maximum and minimum pressures maintained are 40 and 20 pounds, respectively.

The pump, tank, motor and automatic controller are shipped completely assembled, making it necessary only to connect the wires and pipes. The complete outfit is 54 inches long, 18 inches wide and 38 inches high.

Equipment Specifications of System No. 2007

One 18-in. x 48-in. horizontal tank.

One Fig. 1691 "Atlas Junior" automatic electric house pumping outfit including pump, 1/6 horse-power, alternating current, single-phase motor, pump stand, automatic controller, 20-in. x 1 1/4-in. pulley, 6 feet of belting and spring belt tightener.

One Fig. 688 pressure gauge.

One Fig. 900 3/4-in. globe valve.

One Fig. 917 1/2-in. rough hose bibb.

One Fig. 913 3/4-in. stop cock.

One Fig. 904 3/4-in. check valve.

One water gauge.

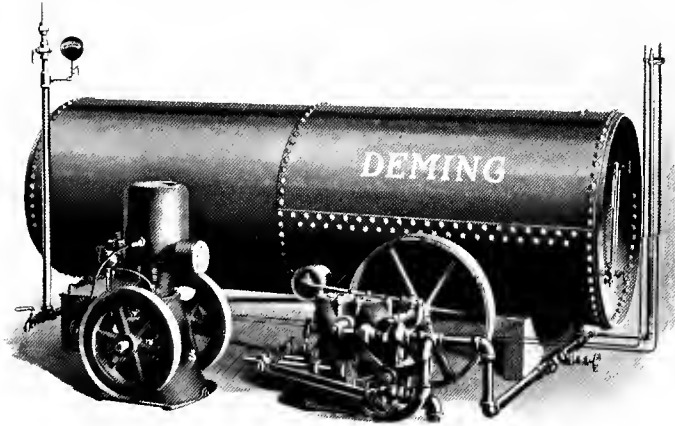
Prices, Capacities, Etc.

PUMP			Total Capacity of Tank Gallons	Complete Weight of Outfit	Cipher	PRICE	
Diam. of Cylinder Inches	Stroke Inches	Capacity per Hour Gallons				With 1/6 H.P. A. C. Motor	Furnished with A. C., Two or Three-Phase Motor or D. C. Motor At Same Price
1 1/4	2	180	53	425	SCALY	\$210.00	

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming "Atlas" Water System No. 2009
 With Gasoline Engine and "Atlas" Power Pump
 For Wells and Cisterns 25 Feet Deep or Less



This system will store water under 75 pounds pressure or less. The pump has a capacity of 575 gallons per hour at 60 revolutions per minute, and is fully described on the preceding pages. The engine is of the hopper-cooled type; four cycle; has hit-and-miss governor; will not freeze; has machine-cut gears; jump spark ignition; operates at 600 revolutions per minute. Diameter of engine pulley, 10 inches; face, 3 inches. It is one of the very best engines on the market. Book of instructions for operating engine is included with each "Atlas" system.

Amount of air to be pumped can be regulated by the air charging device on the pump. The usual maximum pressure maintained is 45 to 50 pounds. This makes a very good outfit for farms, suburban residences, factories, warehouses, etc.

Equipment Specifications of System No. 2009

- One 30-in. x 8-ft. horizontal pressure tank.
- One Fig. 691 "Atlas" double-acting power pump, 2¼ in. x 5 in.; with air charging device and brass-lined cylinder; also Type "CI" drive; 20-in. x 3-in. pulley.
- One 1½ horse-power reliable vertical gasoline engine with 10 feet of canvas belting.
- One Fig. 904 1-in. check valve.
- One automatic gasoline engine stop or circuit breaker.
- One Fig. 900 1-in. globe valve.
- One Fig. 1526 ¾-in. relief valve.
- One Fig. 688 pressure gauge.
- One Fig. 917 ½-in. hose bibb.
- One Fig. 913 stop and waste cock.
- One glass water gauge.

Prices, Capacities, Etc.

Diam. of Cylinder Inches	Stroke Inches	PUMP			TANK			Complete Weight of Outfit Lbs.	Cipher	Price
		Good for Maximum Pressure Lbs.	Capacity per Min. at 60 Strokes Gallons	Weight Lbs.	Capacity of 30" x 8' Tank Gallons	Water Capacity of 30" x 8' Tank Gallons	Weight of Tank Lbs.			
2¼	5	75	9.6	140	295	198	725	1175	SELION	\$235.00

If automatic gasoline engine stop is not wanted, deduct \$6.00 from list price.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



HAND AND POWER PUMPS FOR ALL USES



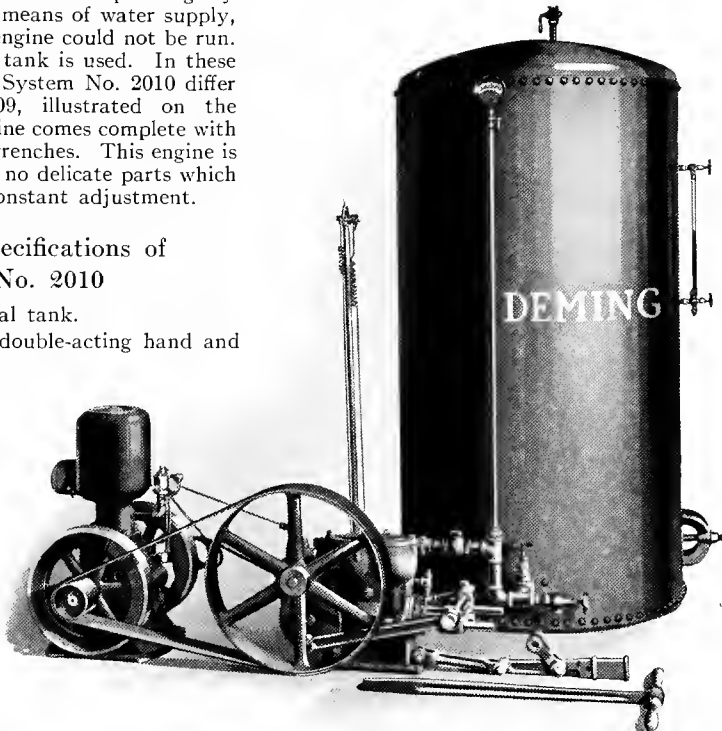
Deming "Atlas" Water System No. 2010

With Gasoline Engine and "Atlas" Pump with Hand Lever
For Wells and Cisterns 25 Feet Deep or Less

In this system the "Atlas" pump is fitted with attachment and lever for operating by hand, which provides a means of water supply, if for some reason, the engine could not be run. A 36-in. x 6-ft. vertical tank is used. In these two respects only, does System No. 2010 differ from System No. 2009, illustrated on the opposite page. The engine comes complete with batteries, oil cups and wrenches. This engine is simplicity itself and has no delicate parts which wear out and require constant adjustment.

Equipment Specifications of System No. 2010

- One 36-in. x 6-ft. vertical tank.
- One Fig. 691 "Atlas" double-acting hand and power pump, 2¼ in. x 5 in.; with brass-lined cylinder and air charging device; 20-in. x 3-in. pulley. (Type "CI" Drive.)
- One 1½ horse-power, vertical, hopper-cooled gasoline engine with 10 feet of canvas belting.
- One automatic gasoline engine stop or circuit breaker which throws out the switch and stops the engine when the desired pressure is attained.
- One Fig. 904 1-in. check valve.
- One Fig. 900 1-in. globe valve.
- One Fig. 913 1-in. stop and waste cock.
- One Fig. 1526 ¾-in. relief valve.



- One Fig. 688 pressure gauge.
- One Fig. 917 ½-in. hose bibb.
- One glass water gauge.

Prices, Capacities, Etc.

PUMP						TANK			Weight of Complete Outfit Lbs.	Cipher	Price
Diam. of Cyl'd'r Inches	Stroke Inches	*Capacity per Min. at 60 Strokes Gallons	Tight Pulley Inches	Weight Lbs.	Good for Maximum Pressure Lbs.	Capacity of 36" x 6' Tank Gallons	Water Capacity of 36" x 6' Tank Gallons	Weight of Tank Lbs.			
2¼	5	9.6	20x3	140	75	315	210	735	1200	SENNA	\$240.00

*When for hand, pump can be operated easily at thirty strokes per minute. If automatic gasoline engine stop is not desired, deduct \$6.00 from list price.

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming "Atlas" Water System No. 2011

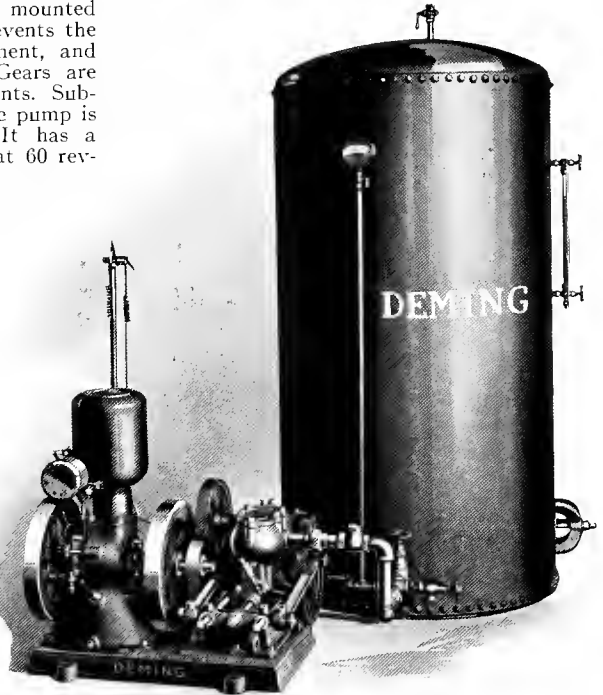
With Direct Connected Gasoline Engine and "Atlas" Power Pump
For Wells and Cisterns 25 Feet Deep or Less

The pump and engine are mounted on a cast iron sub-base which prevents the gears from getting out of alignment, and also makes a compact outfit. Gears are carefully guarded to prevent accidents. Sub-base measures 17 x 29 inches. The pump is described on preceding pages. It has a capacity of 575 gallons per hour at 60 revolutions per minute. The engine is the same as used with all the "Atlas" systems. It will run all day without overheating. It is one of the very best engines on the market.

The amount of air to be pumped into the tank can be regulated by the air charging device on the pump. The usual maximum pressure maintained is from 45 to 50 pounds.

Equipment Specifications of System No. 2011

- One 36-in. x 6-ft. vertical tank.
- One Fig. 691 "Atlas" double-acting power pump, 2 1/4 in. x 5 in.; with air charging device and brass-lined cylinder, also intermediate gear for connecting to gasoline engine.
- One 1 1/2 horse-power vertical, hopper-cooled, high-grade gasoline engine.
- One Fig. 904 1-in. check valve.
- One Fig. 900 1-in. globe valve.
- One Fig. 1526 3/4-in. relief valve.
- One Fig. 688 pressure gauge.
- One Fig. 917 1/2-in. hose bibb.



- One Fig. 913 1-in. stop and waste cock.
- One cast-iron sub-base on which pump and engine are mounted.
- One automatic gasoline engine stop or circuit breaker.
- One glass water gauge.

Prices, Capacities, Etc.

PUMP					TANK			Weight of Complete Outfit Pounds	Cipher	Price
Diam. of Cylinder Inches	Stroke Inches	Capacity per Min. at 60 Strokes Gallons	Weight Pounds	Good for Maximum Pressure Pounds	Capacity of 36" x 6' Tank Gallons	Water Capacity of 36" x 6' Tank Gallons	Weight of Tank Pounds			
2 1/4	5	9.6	140	75	315	210	735	1250	SENATE	\$270.00

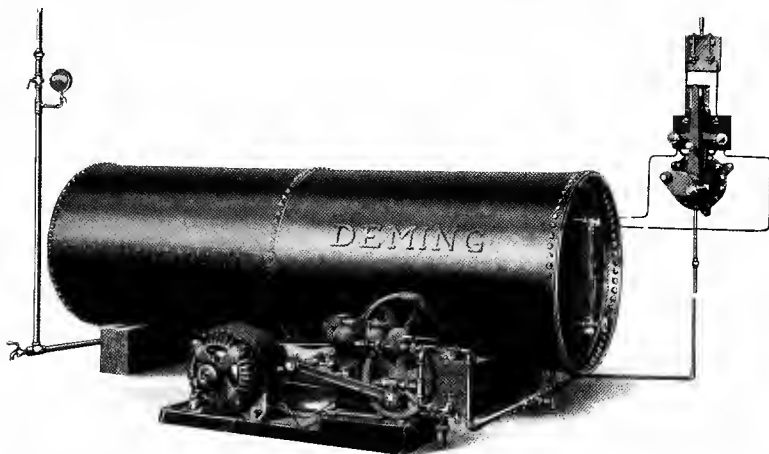
If automatic gasoline engine stop is not desired, deduct \$6.00 from list price.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Atlas" Water System No. 2012

With $\frac{3}{4}$ Horse-power Electric Motor and "Atlas" Power Pump
For Wells and Cisterns 25 Feet Deep or Less



The pump is belted to the motor in this system which practically eliminates all noise. System No. 2012 is, therefore, our most popular motor driven outfit. The automatic pressure regulator starts and stops the motor when the pressure falls or rises beyond a predetermined point. The "Atlas" pump has a capacity of 575 gallons per hour and is fully described on the preceding pages. Pump and motor are mounted upon a cast-iron sub-base 3 ft. x 22 in., and are connected by a short belt. The cast-iron base insures permanent alignment of pump and motor.

We should be fully informed regarding the kind of current and the voltage available.

Equipment Specifications of System No. 2012

- One 30-in. x 8-ft. horizontal tank.
- One Fig. 691, $2\frac{1}{4}$ in. x 5 in. "Atlas" double-acting power pump with air charging device and brass-lined cylinder; with Type "C" drive (including cast-iron sub-base and 20-in. x 3-in. pulley).
- One $\frac{3}{4}$ horse-power, A. C., single-phase, 60-cycle, 110-220 volt electric motor. Price will vary slightly, depending upon the kind of motor required. See list below.
- One Fig. 1508 automatic pressure regulator.
- One Fig. 904 1-in. check valve.
- One Fig. 900 1-in. globe valve.
- One Fig. 1526 $\frac{3}{4}$ -in. relief valve.
- One Fig. 688 pressure gauge.
- One Fig. 917 $\frac{1}{2}$ -in. hose bibb.
- One Fig. 913 1-in. stop and waste cock.
- One 2-pole switch.
- One glass water gauge.

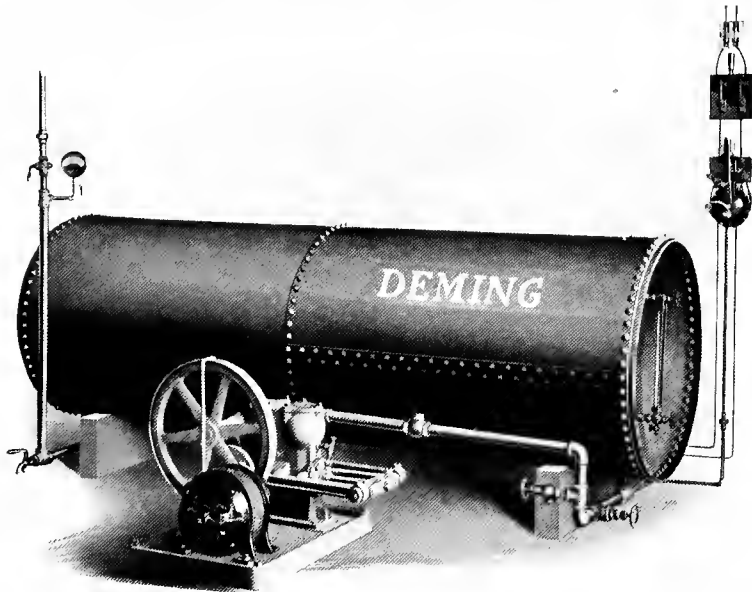
Prices, Capacities, Etc.

PUMP					Capacity of 30" x 8' Tank Gallons	Weight of Complete Outfit Pounds	Cipher	PRICE		
Diam of Cylinder Inches	Stroke Inches	Capacity per Min. at 60 Strokes Gallons	Weight Pounds	Good for Maximum Pressure Pounds				With $\frac{3}{4}$ H. P., A. C. 110-220 Volt Motor	For D. C. Motor Deduct from List	For A. C. Two or Three-phase Motor Deduct from List
$2\frac{1}{4}$	5	9.6	140	75	295	1100	SELVES	\$325.00	\$25.00	\$30.00

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming "Atlas" Water System No. 2013
 With Direct Connected Electric Motor and "Atlas" Power Pump
 For Wells and Cisterns 25 Feet Deep or Less



Where electric power is available, the Deming motor driven water system offers the most desirable means of water supply because the pressure may be automatically controlled. For instance, when the pressure rises to 50 pounds the motor stops, and when it falls to 30 pounds the motor is started automatically. The pressure limits may be varied as desired. This kind of a system requires no attention whatever, except an occasional oiling. The pump and motor are secured to a cast-iron sub-base 3 ft. x 22 in., which insures a proper alignment of the gearing, and also makes a compact outfit. Complete description of the "Atlas" pump will be found on preceding pages. We should be informed regarding the current and voltage available.

Equipment Specifications of System No. 2013

- One 30-in. x 8-ft. horizontal tank.
- One Fig. 691, 2 1/4-in. x 5-in. "Atlas" double-acting power pump, with air charging device, and Type "B" drive (including cast-iron sub-base and gears).
- One 3/4 horse-power, A. C., single-phase, 60-cycle, 110-220 volt electric motor. Price will vary slightly, depending upon the kind of motor required. See list below.
- One Fig. 1508 automatic pressure regulator.
- One Fig. 904 1-in. check valve.
- One Fig. 900 1-in. globe valve.
- One Fig. 1526 3/4-in. relief valve.
- One Fig. 688 pressure gauge.
- One Fig. 917 1/2-in. hose bibb.
- One Fig. 913 1-in. stop and waste cock.
- One 2-pole switch.
- One glass water gauge.

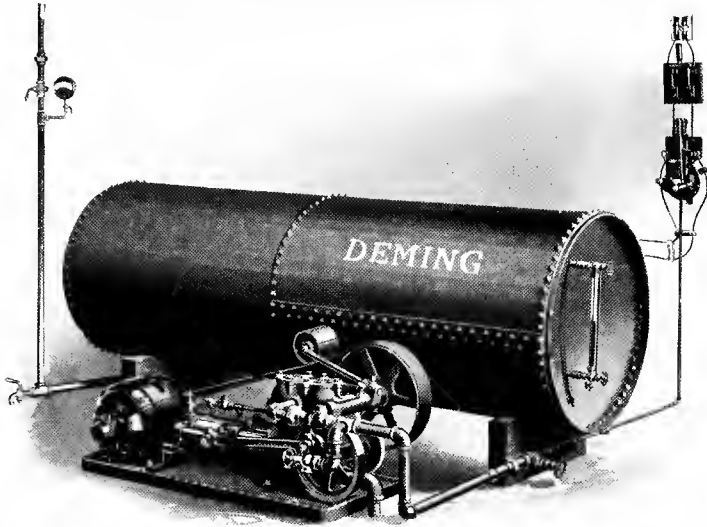
Prices, Capacities, Etc.

PUMP				TANK					PRICE			
Diam. Cylinder Inches	Stroke Inches	Capacity per Min. at 60 Strokes Gallons	Weight Pounds	Good for Maximum Pressure Pounds	Capacity of 30" x 8' Tank Gallons	Water Capacity of 30" x 8' Tank Gallons	Weight of Tank Pounds	Complete Weight of Outfit Pounds	Cipher	With 3/4 H. P. A. C. Motor	For D. C. Motor Deduct from List	For Two or Three-phase A. C. Motor Deduct from List
2 1/4	5	9.6	140	75	295	198	725	1100	SELY	\$325.00	\$25.00	\$30.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming "Atlas" Water System No. 2014
 With Electric Motor, "Atlas" Power Pump and Air Compressor
 For Wells and Cisterns 25 Feet Deep or Less



In System No. 2014, the air supply is provided by a special air compressor, instead of the air charging device used in the "Atlas" outfits on the preceding pages. In many cases the air compressor is preferable; especially when the pump is to be placed below the water level such as pumping from a cistern with the pump located in the cellar. With the independent compressor, the air is pumped into the air chamber and is not taken through the valves of the pump.

The pump and motor are mounted on a cast-iron sub-base, 3 ft. 3 in. x 18 in., with pump belted to motor. This insures permanent alignment of the pump and motor. The pump is automatically controlled. Capacity of pump, 575 gallons per hour at 60 revolutions per minute. We should be informed regarding the kind of current available and also the voltage. This outfit is almost noiseless in operation.

Equipment Specifications of System No. 2014

One 30-in. x 8-ft. horizontal tank.
 One Fig. 691, 2 1/4-in. x 5-in. "Atlas" double-acting power pump with brass-lined cylinder and special independent air compressor; with Type "C" drive (including cast-iron sub-base and 20-in. x 3-in. pulley).
 One 3/4 horse-power, A. C., single-phase, 60-cycle, 110-220-volt motor. Price varies slightly with motor required. See list below. Motor includes canvas belt for connecting to pump.

One Fig. 1508 automatic pressure regulator for starting and stopping motor.
 One Fig. 1526 3/4-in. relief valve.
 One Fig. 688 pressure gauge.
 One Fig. 904 1-in. check valve.
 One Fig. 900 1-in. globe valve.
 One Fig. 913 1-in. stop and waste cock.
 One Fig. 917 1/2-in. hose bibb.
 One glass water gauge.
 One 2-pole switch.

Prices, Capacities, Etc.

P U M P					Capacity of 30" x 8' Tank Gallons	Weight of Complete Outfit Pounds	Cipher	P R I C E		
Diam. Cyl. Inches	Stroke Inches	Capacity per Min. at 60 Strokes Gallons	Weight Pounds	Good for Maximum Pressure Pounds				With 3/4 H. P. A. C. Motor	For D. C. Motor Deduct from List	For A. C. Two or Three Phase Motor Deduct from List
2 1/4	5	9.6	140	75	295	1100	SENDAL	\$335.00	\$25.00	\$30.00

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Geared Deep Well Power Working Head For Hydro-Pneumatic Water Systems

Fig. 66

FIG. 66 is very compactly and substantially designed, and is adapted especially for pumping water from deep wells for suburban homes and other places requiring a moderate water supply. All parts are readily accessible. The lower valves, plunger and rod can be withdrawn without disturbing any pipe connections. The standard head includes cut gearing, tight and loose pulleys and oil cups, as illustrated.

When desired, it is furnished at extra charge with extended walking beam and counterweight for equalizing the plunger load, and with air compressor for supplying air for pneumatic pressure tank system. The compressor consists of a special air cylinder mounted on the base, the plunger being operated from the crosshead of the working head. A pipe from the compressor connects it with the pump discharge, there being also a check valve and necessary couplings in this pipe. An air cock is also provided so that when opened, air will not be delivered to the tank.

TYPE "CS" DRIVE. When the pump is to be driven by motor, the drive as illustrated is recommended. It consists of a cast-iron shelf hinged to the main frame of the working head, the motor being mounted on this shelf and belted to the working head. The weight of the shelf and motor always maintains a tight belt with good belt contact, and is moreover much quieter in operation than if connected by gearing. We recommend the use of our Figs. 311 or 324 artesian well cylinders with this working head.

Specifications, Prices, Capacities, Etc.

Stroke Inches	MAXIMUM DIAMETER OF PIPES		Gear Ratio	Tight and Loose Pulleys	Maximum Height Inches	Weight With Tight and Loose Pulleys Pounds	*Cipher
	Suction Inches	Discharge Inches					
6	3½	1½	6 to 1	12 x 3	25	250	ORRIS

Diameter of Cylinder Inches	CAPACITY			‡Maximum Depth of Well Feet
	Gallons per Rev. of Crank Shaft	Usual Revs. per Minute	Gallons per Minute	
1¾	.063	40	2.52	300
2¼	.103	40	4.12	175
2¾	.154	40	6.16	115
3¼	.215	40	8.60	80

With Tight and Loose Pulleys	Without Tight and Loose Pulleys	Extra for Hand Operating Attachment	Extra for Type "CS" Drive including Belt (Motor not included)	Extra for Extended Walking Beam and 100-Lb. Counterweight	Extra for Air Compressor Including Piping Connections
\$70.00	\$65.00	\$7.00	\$20.00	\$15.00	\$15.00

*When telegraphing with reference to working head with Type "CS" Drive, place cipher word "TYPECS" immediately following cipher word "ORRIS."

‡Refers to vertical distance from surface of water to point of delivery or equivalent pressure.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8

Deming Geared Deep Well Working Head

For Hydro-Pneumatic Water Systems

Fig. 66

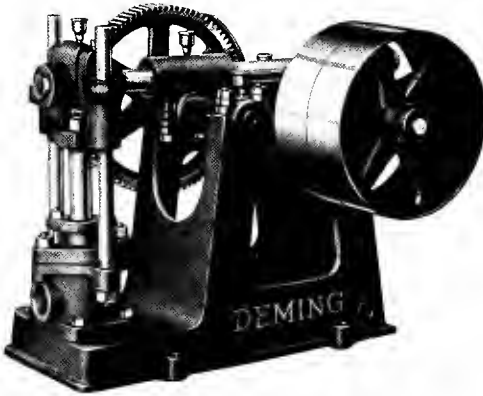


Fig. 66, with Tight and Loose Pulleys

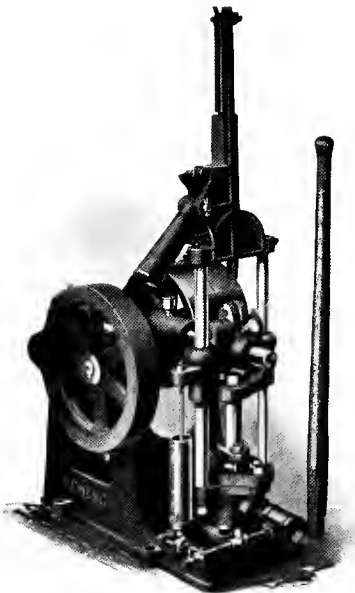


Fig. 66 with Hand Operating Attachment and Air Compressor

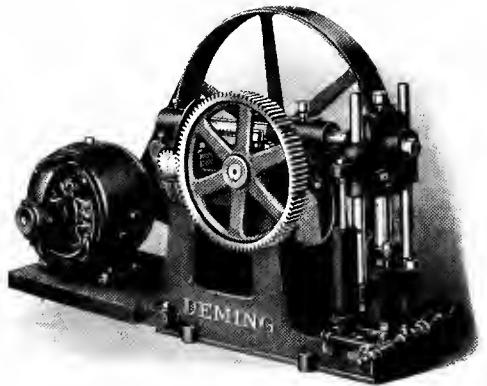
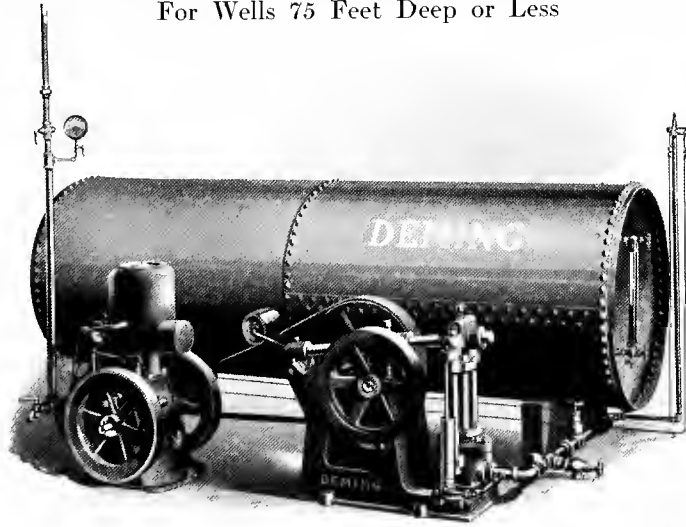


Fig. 66, with Type "CS" Drive and Air Compressor

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Deep Well Water System No. 2015
 With Gasoline Engine and Fig. 66 Power Working Head
 For Wells 75 Feet Deep or Less



This power working head and $1\frac{1}{2}$ horse-power gasoline engine will operate a $2\frac{1}{4}$ -in. x 10-in. artesian well cylinder in a 75-foot well against 60 pounds pressure in the tank, and will supply, under these conditions, about 250 gallons per hour.

The air required for the pneumatic tank is supplied by a special air compressor operated by crosshead on pump.

The $1\frac{1}{2}$ horse-power vertical engine is water-cooled and of the hopper type.

Varying conditions in deep well installations will often necessitate the use of different sizes of cylinders and engines. It is well therefore, to send us full particulars before ordering a deep well outfit. However, for many installations, System No. 2015 will be satisfactory without alteration in equipment.

Equipment Specifications of System No. 2015

- One 30-in. x 8-ft. horizontal tank.
- One Fig. 66 deep well power working head with 16-in. tight pulley, belt tightener and air compressor.
- One Fig. 311 $2\frac{1}{4}$ -in. x 10-in. brass cylinder.
- One $1\frac{1}{2}$ horse-power, reliable, vertical gasoline engine with 10 ft. of canvas belting.

- One automatic gasoline engine stop or circuit breaker.
- One Fig. 1526 $\frac{3}{4}$ -in. relief valve.
- One Fig. 688 pressure gauge.
- One Fig. 904 1-in. check valve.
- One Fig. 900 1-in. globe valve.
- One Fig. 913 1-in. stop and waste cock.
- One Fig. 917 $\frac{1}{2}$ -in. hose bibb.
- One water gauge.

Sizes, Capacities, Prices, Etc.

WORKING HEAD			CYLINDER FIG. 311		TANK			Weight of Complete Outfit	Cipher	Price
Stroke Inches	Suction Fitted for Pipe Inches	Discharge Fitted for Pipe Inches	Diameter and Length Inches	Gallons per Min. at 40 Revs. of Crank Shaft	Capacity of 30" x 8' Tank Gallons	Water Capacity of 30" x 8' Tank Gallons	Weight of Tank Pounds			
6	$2\frac{1}{2}$	1	$2\frac{1}{4}$ x10	4.12	295	198	725	1400	SEME	\$310.00

If automatic gasoline engine stop is not desired, deduct \$6.00 from list price.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



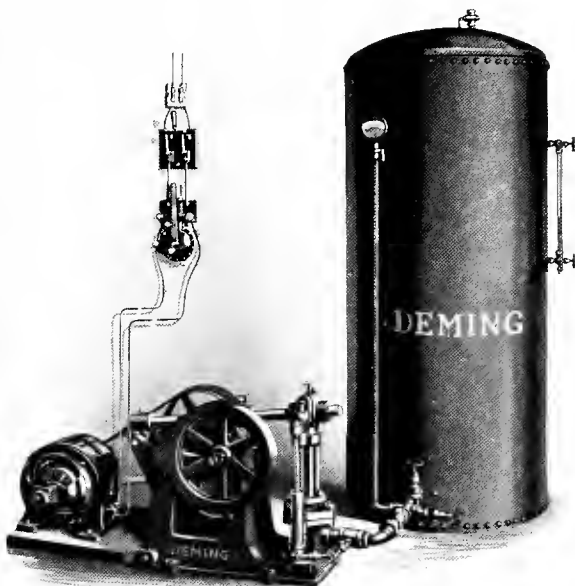
Deming Deep Well Water System No. 2016

With Electric Motor and Fig. 66 Power Working Head
For Wells 75 Feet Deep or Less

In this system, the air is supplied to the tank by means of an air compressor, which is constructed as a part of the power working head, and which is operated from the pump crosshead.

Should no air be desired while the head is operating, a pet cock may be opened which will permit the escape of the air. This system has a capacity of about 250 gallons per hour, when working against a tank pressure of 60 pounds, and using a 2 $\frac{1}{4}$ -in. x 10-in. artesian well cylinder in a 75-foot well. We should be fully informed regarding the kind of current and the voltage available.

Since conditions affecting deep well installations may vary greatly, different sizes of cylinders and motor are often required. It is best therefore, to send us complete details before ordering a deep well outfit. However, for many installations, System No. 2016 will be satisfactory without alteration in equipment specified below.



Equipment Specifications of System No. 2016

- One 36-in. x 6-ft. vertical tank.
- One Fig. 66 deep well power working head with air compressor and "CS" drive.
- One 1 $\frac{1}{2}$ horse-power, A. C., single-phase, 60-cycle, 110-220-volt electric motor. Price will vary slightly, depending upon the kind of motor required. See list below.
- One Fig. 1508 automatic pressure regulator.

- One Fig. 311 special brass cylinder.
- One Fig. 1526 $\frac{3}{4}$ -in. relief valve.
- One Fig. 688 pressure gauge.
- One Fig. 904 1-in. check valve.
- One Fig. 900 1-in. globe valve.
- One Fig. 917 $\frac{1}{2}$ -in. hose bibb.
- One Fig. 913 1-in. stop and waste cock.
- One glass water gauge.

Sizes, Capacities, Prices, Etc.

WORKING HEAD			CYLINDER				PRICE				
Stroke Inches	Suction Fitted for Pipe Inches	Discharge Fitted for Pipe Inches	Diam. and Length Inches	Gallons per Min. at 40 Revs.	Capacity of 36" x 6' Tank Gallons	Complete Weight of Outfit Pounds	Cipher	With 1 $\frac{1}{2}$ H. P. A. C. Single Phase Motor	For D. C. Motor Deduct from List	For Two or Three-phase A. C. Motor Deduct from List	
6	2 $\frac{1}{2}$	1	2 $\frac{1}{4}$ x10	4.12	315	1300	SERE	\$420.00	\$20.00	\$25.00	

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Deep Well Power Working Head

Fig. 62, with Differential Plunger

Fig. 62 is adapted especially for supplying water from deep wells for private estates, manufacturing plants, farms, etc. It is very substantially built, and the "low-down" design, as well as other features, make it the most accessible deep well pump on the market. By disconnecting the differential plunger from the crosshead and the walking beam from the connecting rod, and removing the stuffing box cap, the plunger can be readily withdrawn without disturbing the pipe connections. The stroke is adjustable, thereby permitting the easy regulation of the pump capacity to the flow of the water in the well.

The main base is of cast iron, and carries the crank and pinion shaft bearings, which are lined with best babbit metal.

The gearing is machine cut, the main gear being bolted to a flange integral with the crank shaft.

The crosshead is babbit lined, and the guide rods are of polished steel.

Each pump has a differential plunger which discharges part of the water on the down stroke, thus equalizing the load and giving a more uniform flow of water. The stuffing box is very easy of access for repacking, the gland being of the bolted type. Air chamber furnished at extra price.

Fig. 62 with Type "B" Drive (Cipher, TYPEB) is the standard pump without pulleys, but with extended base and gearing connection for electric motor.

Fig. 62 with Type "C" Drive (Cipher, TYPEC) is the standard pump mounted on sub-base for connection to electric motor, and including short belt and belt tightener.

On the following pages, Fig. 62 is illustrated in connection with hydro-pneumatic Systems Nos. 2017 and 2018.

With these working heads we recommend using our Fig. 324 or Fig. 311 artesian well cylinders and Fig. 636 octagon wood sucker rod.

Fig. 62, Sizes, Etc.

Stroke Inches	MAXIMUM DIAMETER OF PIPES		Gear Ratio	Tight and Loose Pulleys	Maximum Height, Inches	*CIPHER Standard Pump with Pulleys
	Suction Inches	Discharge Inches				
8, 9 and 10	4½	2½	6 to 1	16 x 3	40½	ODIN
12, 14 and 16	6	3	7 to 1	20 x 5	51	ODIUM
20, 22 and 24	8	4	6½ to 1	28 x 6	73	ODIZE

*When telegraphing with regard to the Type "B" or "C" Drive, place the cipher word representing the Type of Drive immediately following the cipher word for the standard pump.

Fig. 62, Capacities

Diam. and Stroke of Cylinder	CAPACITY			†Maximum Depth of Well, feet
	Gallons per Rev. of Crank Shaft	Maximum Revs. per Min.	Gallons per Min.	
2¼ x 10	.257	40	10.2	300
2¾ x 16	.411	35	14.3	300
2¾ x 24	.617	28	17.2	350
3¼ x 10	.478	40	19.1	175
3¼ x 16	.765	35	26.7	175
3¼ x 24	1.147	28	32.1	190
4¼ x 10	.614	40	24.5	130
4¼ x 16	1.227	35	42.9	100
4¼ x 24	1.841	28	51.5	120
5¼ x 16	1.798	35	62.9	70
5¼ x 24	2.696	28	75.4	80
6¾ x 24	3.716	28	104.0	60
7¾ x 24	4.900	28	137.2	45

†Refers to vertical distance from lowest surface of water in well to highest point of delivery.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Deep Well Power Working Head

With Differential Plunger

Fig. 62

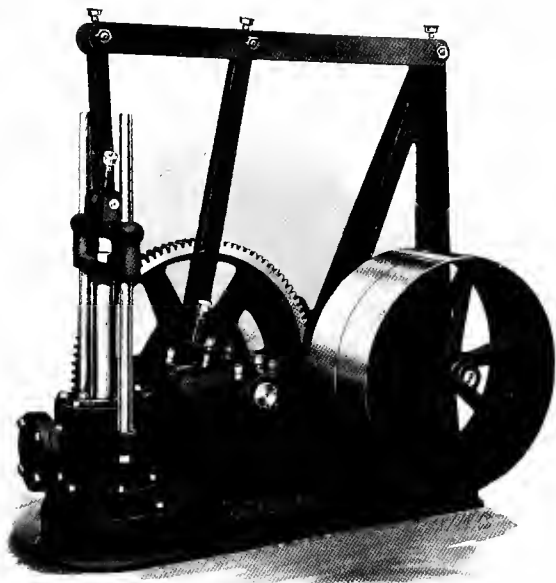


Fig. 62, with Tight and Loose Pulleys



Fig. 62, with Type "C" Drive and Fig. 64 Separate Air Cylinder

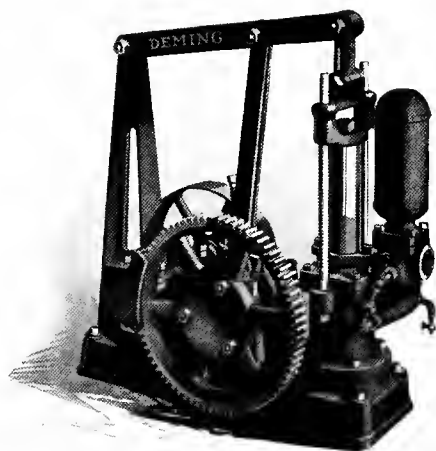


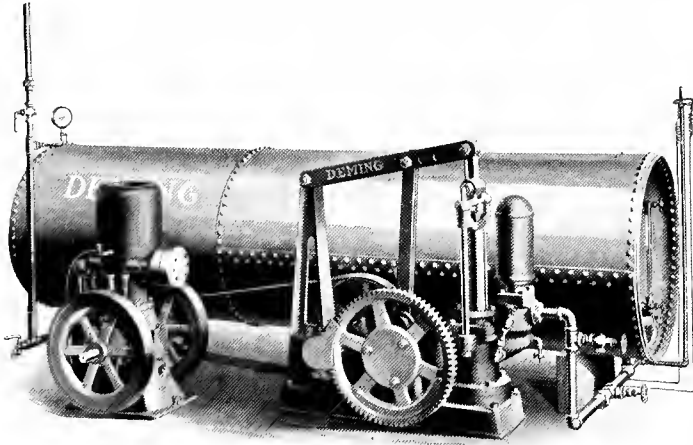
Fig. 62, with Fig. 63 Air Pumping Attachment

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Deep Well Water System No. 2017

With Gasoline Engine and Fig. 62 Power Working Head
For Wells 150 Feet Deep or Less



For supplying water from deep wells for factories, large estates, etc., System No. 2017 is very desirable. The power working head is our standard Fig. 62 except that it is furnished with Fig. 63 air pumping attachment in the discharge head when the well cylinder does not exceed 3 $\frac{1}{4}$ in. inside diameter. The gasoline engine is a standard four-cycle, vertical, water-cooled type of thoroughly reliable make and is connected to the working head by a short belt.

Before ordering a deep well outfit it is usually best to send us full particulars as to the depth and the inside diameter of the well, and pressure required in the tank, as it is sometimes desirable to vary the size of the cylinder or other parts to meet existing conditions. In most cases, however, where a capacity of not more than 600 gallons per hour is required, the standard system, No. 2017, as listed below, will be entirely satisfactory without changing.

For depth of well and size of cylinder recommended, see table on the page describing Fig. 62.

Equipment Specifications of System No. 2017

One 36-in. x 12-ft. horizontal tank.
One Fig. 62 deep well power working head, 10-in. stroke, with tight pulley and Fig. 63 air pumping device.
One 3 horse-power, water-cooled, vertical gasoline engine and friction clutch.
One Fig. 311 2 $\frac{3}{4}$ -in. x 10-in. special brass cylinder.

One automatic engine stop or circuit breaker.
Twelve feet of canvas belt.
One Fig. 1526 $\frac{3}{4}$ -in. relief valve.
One Fig. 688 pressure gauge.
One Fig. 900 1 $\frac{1}{2}$ -in. globe valve.
One Fig. 913 1-in. stop and waste cock.
One Fig. 917 $\frac{1}{2}$ -in. hose bibb.
One glass water gauge.

Sizes, Capacities, Prices, Etc.

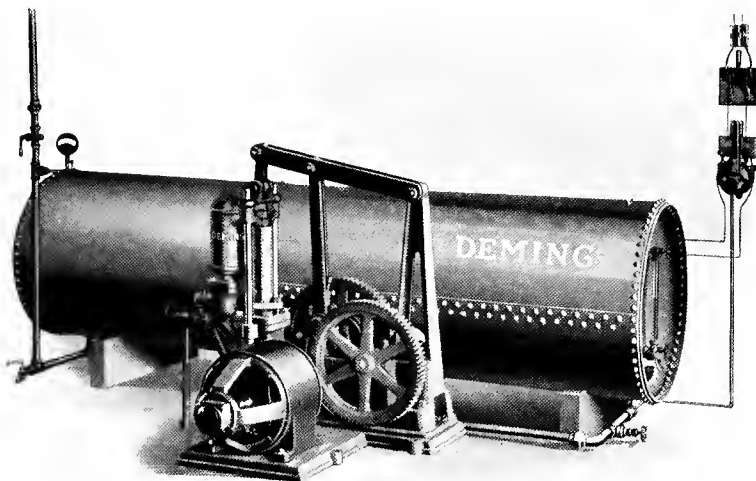
WORKING HEAD	CYLINDER			TANK			CIPHER	Price
	Diameter and Length Inches	Capacity per Min. at 40 Rev. of Crankshaft Gallons	Capacity of 36" x 12' Tank Gallons	Water Capacity of 36" x 12' Tank Gallons	Weight Pounds	Weight of Complete Outfit Pounds		
Stroke Inches								
8, 9 or 10	2 $\frac{3}{4}$ x 10	10.2	635	425	1200	2100	SERAI	\$475.00

If automatic gasoline engine stop is not wanted, deduct \$6.00 from list price.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Deep Well Water System No. 2018 With Electric Motor, and Fig. 62 Power Working Head For Wells 150 Feet Deep or Less



With a Fig. 311, 2 $\frac{3}{4}$ -in. x 10-in. cylinder at a depth of 150 feet below the surface, this system will supply 600 gallons of water per hour against 60 pounds pressure in the tank.

When preferred, the connection between working head and motor is made by a short belt with tightener instead of gearing at the same price, this being designated as Type "C" drive.

Air for the pneumatic tank is supplied by the Fig. 63 air pumping device in the discharge head when the well cylinder does not exceed 3 $\frac{1}{4}$ inches inside diameter, but when a cylinder larger than 3 $\frac{1}{4}$ inches diameter is used, Fig. 64 air compressor attachment is furnished.

While the System No. 2018 as listed below will be satisfactory for most conditions where a capacity of not more than 600 gallons per hour is required (from a deep well), we nevertheless advise that full information as to the depth of the well, inside diameter of same and the discharge pressure required should be sent with the order.

Equipment Specifications of System No. 2018

One 36-in. x 12-ft. horizontal tank.

One Fig. 62 power working head, with Type "B" drive and Fig. 63 air pumping device.

One Fig. 311, 2 $\frac{3}{4}$ -in. x 10-in. brass cylinder.

One 3 H. P. A. C. single phase, 60 cycle, 110-220 volt motor.

One two-pole switch.

One Fig. 1508 automatic pressure regulator.

One Fig. 1526 $\frac{3}{4}$ -in. relief valve.

One Fig. 688 pressure gauge.

One Fig. 900 1 $\frac{1}{2}$ -in. globe valve.

One Fig. 913 1-in. stop and waste cock.

One Fig. 917 $\frac{1}{2}$ -in. hose bibb.

One glass water gauge.

Sizes, Capacities, Prices, Etc.

WORKING HEAD	CYLINDER		Total Capacity of 36-in. x 12-ft. Tank Gallons	Weight of Complete Outfit Pounds	Cipher	Price with 3 H. P. A. C. Single Phase Motor	For D. C. Motor Deduct From List	For A. C. Two or Three Phase Motor Deduct From List
	Stroke Inches	Diameter and Length Inches							Capacity per Minute 40 Revs. Gallons
8, 9 or 10	2 $\frac{3}{4}$ x 10	10.2	635	2200	SERIN	\$600.00	\$20.00	\$65.00

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Deming Triplex Pumps for Hydro-Pneumatic Service For Use Where a Large Quantity of Water is Required

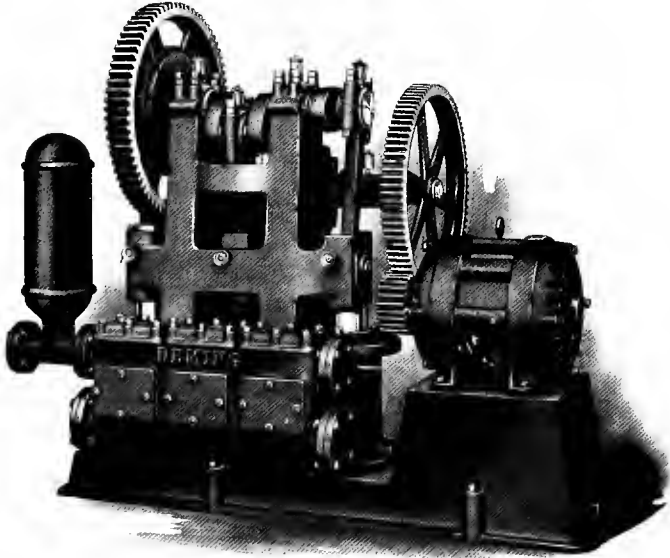


Fig. 50. Sizes $5\frac{1}{4} \times 8$ to $8\frac{1}{2} \times 8$ with Type "B" Drive

For installations where very large quantities of water are necessary, we recommend the use of our triplex pumps. These are made in capacities up to 60,000 gallons per hour. We also can supply hydro-pneumatic tanks with capacities of 12,000 gallons or less.

When the source of supply is at a much lower elevation than the point where the water is to be used, and also a considerable distance away, our triplex pumps are preferred. *Deming triplex power pumps are more completely illustrated and described on pages 186 to 212.*

We do not list any complete hydro-pneumatic outfits in which triplex pumps are used, for the reason that in large installations the conditions vary so very much that we prefer to handle such propositions as individual cases in order to determine the outfit best suited to existing conditions.

Such outfits usually consist of a Deming triplex pump, hydro-pneumatic tank, electric motor or gasoline engine, with the Deming air pumping device, and the necessary valves, gauges, etc.

Deming triplex pumps are especially adapted for hydro-pneumatic service in hotels, country estates, etc. When electric current is available, they may be automatically controlled. They are made in a great many different styles and sizes for varying conditions.

To quote intelligently we should know the quantity of water required per day; vertical distance from surface of water to the pump suction inlet and length of suction pipe; elevation from surface at well to point of delivery and length of discharge pipe. Give kind of motive power preferred; if electric current, state kind of current and voltage.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Standard Hydro-Pneumatic Steel Tanks

With Convex and Concave Heads



These tanks are made of best open hearth flange steel with double riveted longitudinal seams, and are all tested to 125 lbs. air pressure. The prices below do not include water and pressure gauges or other accessories, but holes for pipe connections are tapped to suit conditions. All tanks are painted inside with a special anti-rust paint.

Sizes, Capacities, Prices, Etc.

Diam. Inches	Length Feet	THICKNESS		Weight	Cap. in Gals.	LIST PRICE	Diam. Inches	Length Feet	THICKNESS		Weight	Cap. in Gals.	LIST PRICE
		Shell	H'ds						Shell	H'ds			
24	6	$\frac{3}{16}$	$\frac{1}{4}$	445	141	\$40.00	42	8	$\frac{1}{4}$	$\frac{3}{8}$	1360	572	\$ 95.00
24	8	$\frac{3}{16}$	$\frac{1}{4}$	550	188	50.00	42	10	$\frac{1}{4}$	$\frac{3}{8}$	1590	716	113.00
24	10	$\frac{3}{16}$	$\frac{1}{4}$	665	235	56.00	42	12	$\frac{1}{4}$	$\frac{3}{8}$	1880	860	140.00
30	6	$\frac{3}{16}$	$\frac{5}{16}$	575	221	52.00	42	14	$\frac{1}{4}$	$\frac{3}{8}$	2150	1000	155.00
30	8	$\frac{3}{16}$	$\frac{5}{16}$	715	294	64.00	42	16	$\frac{1}{4}$	$\frac{3}{8}$	2415	1150	168.00
30	10	$\frac{3}{16}$	$\frac{5}{16}$	850	372	73.00	48	12	$\frac{1}{4}$	$\frac{3}{8}$	2200	1130	163.00
30	12	$\frac{3}{16}$	$\frac{5}{16}$	940	440	84.00	48	14	$\frac{1}{4}$	$\frac{3}{8}$	2500	1300	183.00
36	6	$\frac{3}{16}$	$\frac{5}{16}$	735	318	66.00	48	16	$\frac{1}{4}$	$\frac{3}{8}$	2800	1500	203.00
36	8	$\frac{3}{16}$	$\frac{5}{16}$	910	424	78.00	48	18	$\frac{1}{8}$	$\frac{1}{2}$	3700	1700	224.00
36	10	$\frac{3}{16}$	$\frac{5}{16}$	1075	530	92.00	48	20	$\frac{1}{8}$	$\frac{1}{2}$	4050	1880	244.00
36	12	$\frac{3}{16}$	$\frac{5}{16}$	1250	635	103.00	48	24	$\frac{1}{8}$	$\frac{1}{2}$	4725	2260	284.00

EXTRAS—Hand Holes, \$5.00; Manhole in Shell, \$30.00; Manhole in Head, \$18.00.

The water capacity is two-thirds of the capacities given above.

An additional charge will be made for tappings other than standard.

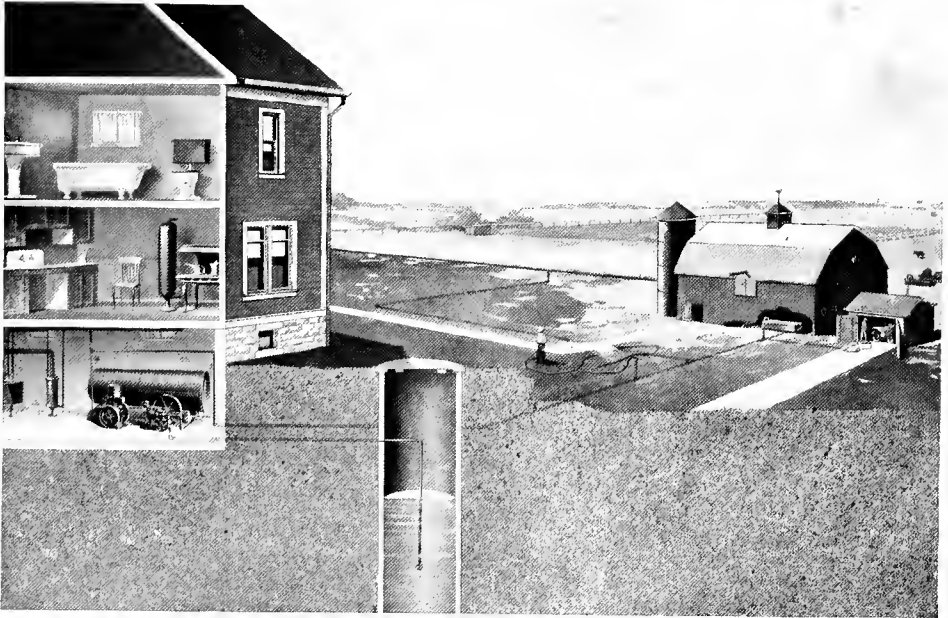
Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



THE DEMING COMPANY, SALEM, OHIO, U. S. A.



An Ideal Water System for the Farm Home Which Combines City Conveniences with Country Advantages



Many Farmers' Wives Lift a Ton of Water a Day!

An Acknowledged Authority Declares Pumping Systems Should Be Installed

In contrast to the illustration above, representing a plan by means of which the housewife can complete her daily tasks with ease and in a short time, compare the statement of the President of the Mississippi Normal College which is reproduced below:

"The getting of the water from the source of supply to the point of application requires more manual labor than any other item of housekeeping. The water for the kitchen has to be lifted from the well, carried to the kitchen, poured into a kettle, poured out of the kettle into the dishpan and from the dishpan out of doors. This makes six times the water is handled; and a bucket of water containing two gallons, with the containing vessel, will weigh twenty pounds. When this is handled six times the total lifting is 120 pounds.

"The cooking of three meals a day on a meager allowance of water will necessitate ten buckets, which will make for cooking alone 1,200 pounds of lifting per day. When to this is added the water necessary for bathing, scrubbing and the weekly wash, it will easily bring the lift per day up to a ton; and the lifting of a ton a day will take the elasticity out of a woman's step, the bloom out of her cheek and the enjoyment from her soul."

This monotonous grind could be averted by the installation of a Deming pumping system, which would soon pay for itself in doctors' bills saved; and in the increased comfort and happiness which are the natural result of good health and relief from drudgery.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8

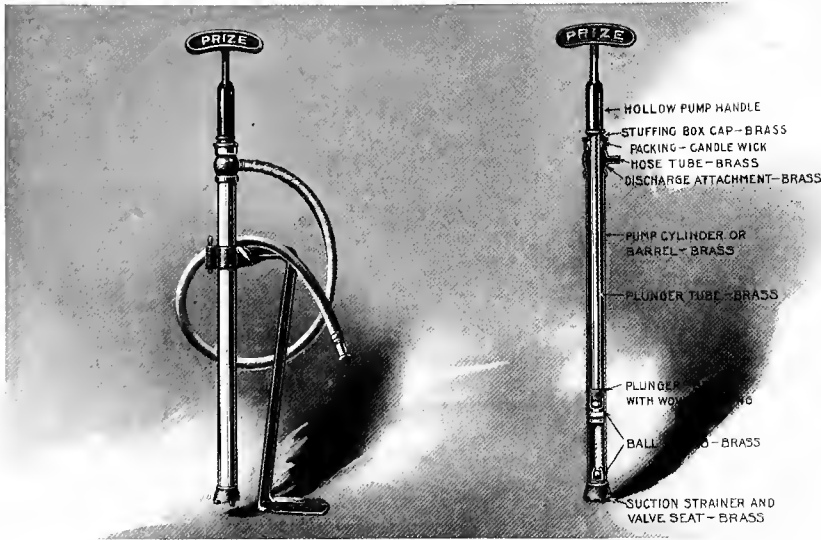


SPRAY PUMPS
AND
ACCESSORIES

FOR ALL
SPRAYING CONDITIONS

INCLUDING BUCKET, KNAPSACK, BARREL, TANK, COMPRESSED AIR, AND CART SPRAYERS FOR THE GARDEN, GREENHOUSE AND ORCHARD; INDEPENDENT POWER SPRAY PUMPS AND POWER SPRAYING OUTFITS FOR EXTENSIVE OPERATIONS; FIELD SPRAYERS, SPRAY NOZZLES, SPRAYING ATTACHMENTS, ETC.





The "Prize" Bucket Sprayer, Fig. 669

The "Prize" is our lowest priced spray pump, but its usefulness cannot be measured by its cost. It was our aim to make a first-class sprayer for a reasonable price. The many testimonials received from purchasers of this pump are evidence of our success in attaining this result. The "Prize" is "Much in Little."

Specifications

PUMP: The working parts of the pump are brass, including cylinder, plunger tube, plunger, valve seats and valve cages. The valves are bronze balls, a true sphere to one one-thousandth of an inch.

AIR CHAMBER is in the plunger tube and in the hollow iron handle. The discharge chamber is brass.

HOSE AND NOZZLE: The "Acme" spray nozzle, our simplest and cheapest is used, with 3 feet of $\frac{3}{8}$ -inch hose. The "Bordeaux," our patent adjustable nozzle for all spraying conditions, is furnished at additional cost. See list below.

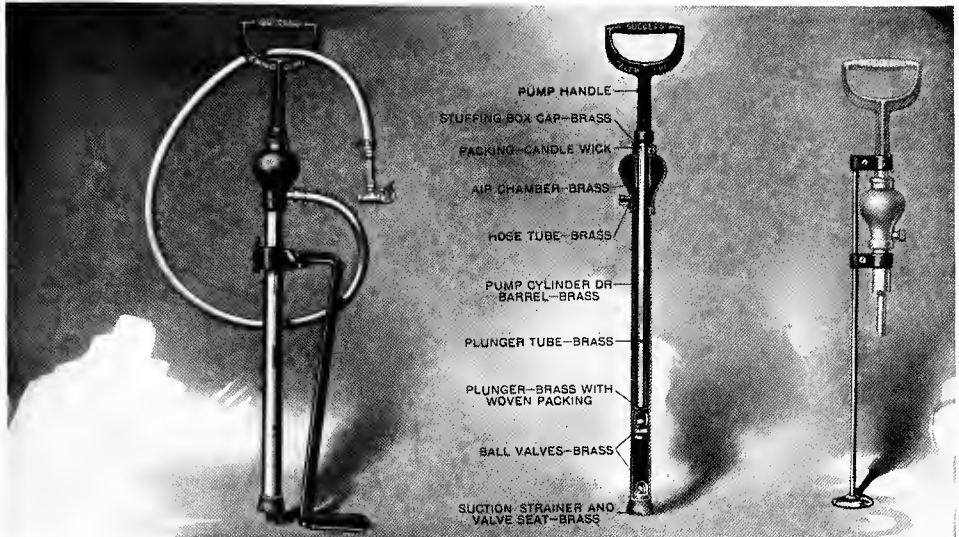
FOOT REST is of malleable iron, 12 inches high, and clamps to the cylinder of pump.

SHIPPING WEIGHT, crated, is about nine pounds. The pump is put up in a strawboard box.

Price List

Fig. 669 — "Prize" bucket pump, as illustrated, (Cipher, KAFIR)	\$5.00
Fig. 669 — With "Bordeaux" nozzle instead of "Acme," (Cipher, KINEMATIC)	5.50
Seven-foot section of $\frac{3}{8}$ -inch hose with couplings and pole holder, for tree spraying, (Cipher, KEDLACK)	2.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



The "Success" Bucket Sprayer, Fig. 659

The "Success" spray pump by its truly excellent qualities is a success, in fact as well as in name. "Nothing succeeds like success." For the garden, greenhouse and small orchard, this pump is indispensable. It is very useful for washing windows and buggies and putting out fires, as well as for whitewashing poultry houses.

The "Success" pump has become one of the most popular articles in the shelf-hardware trade where it is also a success in drawing and holding customers. Each "Success" pump sold causes more sales. THE NAME "SUCCESS" IS A REGISTERED TRADE-MARK.

Specifications

PUMP: Working parts and cylinder are brass, as shown in sectional engraving above. **AIR CHAMBER** is the globe shaped enlargement at top of cylinder and is of cast brass. It causes ease of motion and discharge of a steady stream.

AGITATOR: The Dash-Disc Agitator, Fig. 759, (shown with spraying accessories), is attachable to "Success" pumps, Figs. 659 and 689, and is furnished ready to attach at extra cost, as below.

HOSE AND NOZZLE: The "Bordeaux" spray nozzle (see page representing nozzles), is furnished with the "Success" bucket pump, also a 3-foot section of $\frac{3}{8}$ -inch hose. THE HOSE IS CONNECTED TO PUMP BY A SWIVEL COUPLING.

FOOT REST: Malleable iron. Is clamped to the cylinder. It is 15 inches high, this being sufficient for using with any tall bucket — even a tobacco bucket.

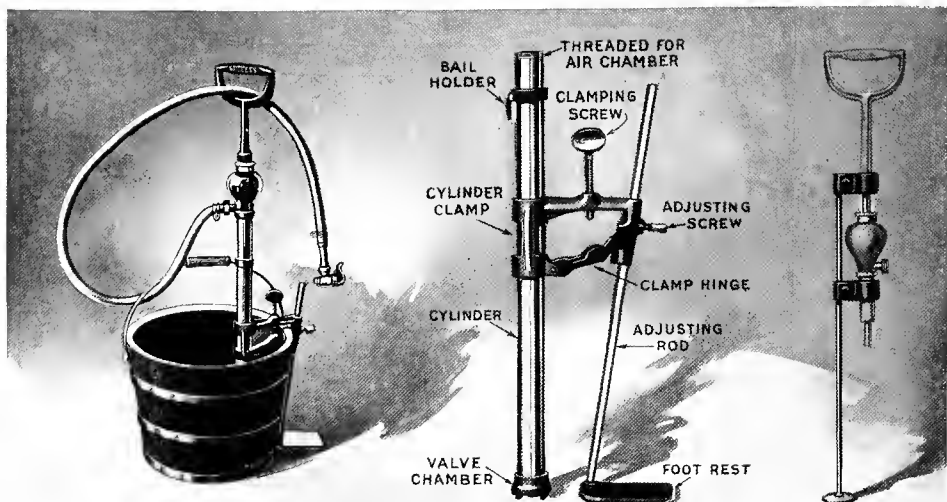
HANDLE is made of malleable iron which is unbreakable.

SHIPPING WEIGHT, crated, is about 10 pounds. The pump is put up in a neat straw-board box.

Price List

Fig. 659 — "Success" pump, as described, (Cipher, KORAN)	\$6.00
Fig. 659½ — "Success" pump ("Veterinary Success," see Veterinary Nozzle on page of accessories), with 12 feet of $\frac{3}{8}$ -inch hose and "Simplex" nozzle, (Cipher, KUSSIR)	7.50
Seven-foot section of $\frac{3}{8}$ -inch hose with couplings and pole holder, for tree spraying, (Cipher, KEDLACK)	2.00
Dash-Disc Agitator, Fig. 759, (see cut above, also cut and list on page showing accessories), easily attached, (Cipher, KINGLING)	1.50

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



The "Perfect Success" Sprayer, Fig. 689

Fig. 689, the "Perfect Success" spray pump, has some advantages over the "Success" pump shown on the preceding page in that the adjustable foot rest is combined with a bucket clamp, shown in detail above. By means of this device, the pump and bucket are rigidly fastened together so the whole outfit can be carried from place to place by the bail when bucket is filled with mixture. Except for the combination clamp and foot rest the pump is the same as Fig. 659, and it has 4 feet of discharge hose instead of 3 feet as in Fig. 659. The BUCKET IS NOT FURNISHED but is illustrated to show how the outfit is used.

Specifications

PUMP: Working parts and cylinder all brass, as in sectional view on preceding page. **AIR CHAMBER** is of brass, the same in this pump as in the "Success" pump, Fig. 659. **AGITATOR:** The Dash-Disc Agitator, Fig. 759, (see above and page representing accessories), is attachable to Figs. 659 and 689, being furnished ready to attach at extra cost as below.

HOSE AND NOZZLE: The Deming patent "Bordeaux" nozzle, (see page of nozzles), is furnished. The "Perfect Success" sprayer has 4 feet of $\frac{3}{8}$ -inch discharge hose. THE HOSE IS CONNECTED TO PUMP BY A SWIVEL COUPLING.

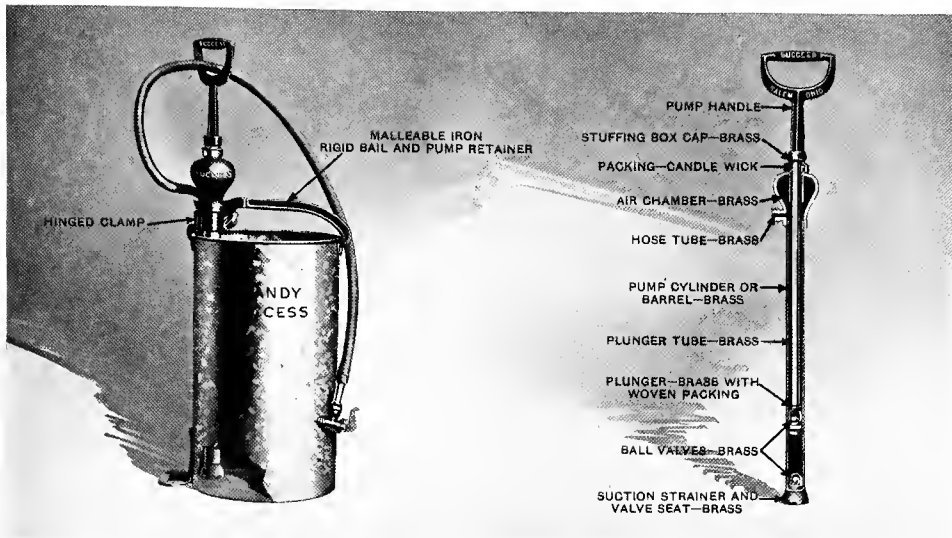
FOOT REST is a special combined adjustable foot rest and bucket clamp, as described and as shown in detail engraving. The bucket clamp and part attached to the cylinder are malleable iron. The height adjusting-rod is steel with foot piece of iron.

SHIPPING WEIGHT, crated, is about 12 pounds. The pump complete is put up in a straw-board box.

Price List

Fig. 689 — "Perfect Success" pump, as described, (Cipher, KELTER)	\$7.00
Seven-foot section of $\frac{3}{8}$ -inch hose with couplings and pole holder, for tree spraying, (Cipher, KEDLACK)	2.00
Dash-Disc Agitator, Fig. 759, (see cut above, also cut and list, page showing accessories), easily attached, (Cipher, KINGLING)	1.50

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



The "Handy Success" Sprayer, Fig. 968 (Patented)

This simple arrangement of the "Success" pump in a portable tank is a very handy and useful outfit. The "Bordeaux" nozzle is used because it is the best general purpose nozzle. See description on page illustrating and listing nozzles.

The "Handy Success" is useful for the FLORIST, GARDENER, POULTRYMAN and STOCKMAN.

Specifications

PUMP: This is the "Success" pump, but with rigid bail and pump clamp, as on Fig. 662, the "Universal Success" sprayer.

TANK has capacity of four gallons, being made of galvanized iron or brass, as listed below. A foot rest is placed at the bottom of tank next to the pump. The bail and clamp hold pump rigidly without distorting the brass tube cylinder of pump.

HOSE AND NOZZLE: Four feet of 3/8-inch hose and "Bordeaux" combination nozzle, as shown in the illustration above.

SHIPPING WEIGHT: The weight, boxed for shipment, is about 25 pounds.

Price List

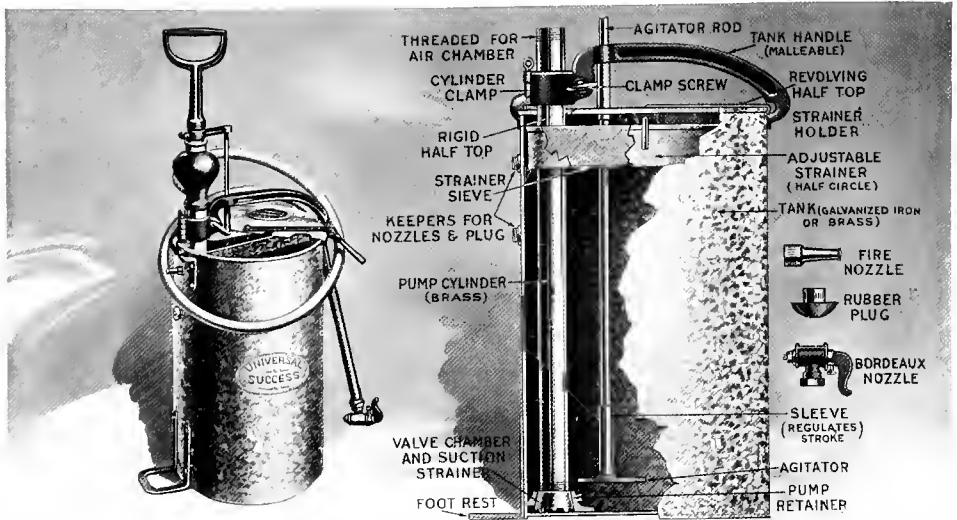
Fig. 968 — Handy "Success" sprayer, with galvanized tank, (Cipher, KIVER) \$ 8.00

Fig. 968 — With brass tank, (Cipher, KRIS) 11.00

Veterinary nozzle is shown on page of accessories.

Seven-foot section of 3/8-inch hose with couplings and pole holder, for "Bucket" and "Knapsack" sprayers, (Cipher, KEDLACK) 2.00

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



The "Universal Success" Sprayer, Fig. 662
(Patented)

This outfit is a most useful one for the farm, garden, factory and store. There are six uses, any one of them well worth while, as follows:

IT IS, (1) A SPRAY PUMP; (2) A WHITEWASHING PUMP; (3) A PUMP FOR OILING FLOORS TO KEEP DOWN THE DUST; (4) A FIRE PROTECTION PUMP; (5) A BUGGY AND WINDOW WASHER; (6) A PLUMBERS' FORCE PUMP. An attractive sign in colors, with nozzles and attachments, is furnished to dealers. THE FIRE NOZZLE SHOULD BE ATTACHED to discharge pipe with water in tank when outfit is not in use.

Specifications

PUMP: The same as our other "Success" brass pumps in construction (see preceding pages), but with cylinder clamp on handle of tank and AT BOTTOM of same. An agitator is fastened to handle of pump which stirs the liquid.

TANK has capacity of 4 gallons and is of galvanized iron or brass, AS ORDERED. A foot rest is attached to tank near the pump. There is also a sliding cover with gravity lock and a strainer for the liquid. The tank has two keepers for the two nozzles (or nozzle and one attachment) not in use.

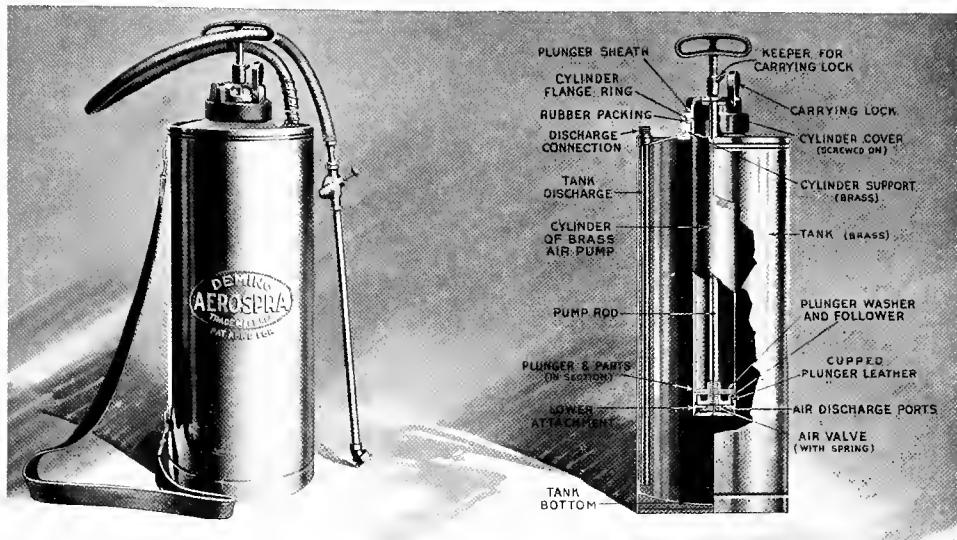
HOSE AND NOZZLES: Four feet of 3/8-inch hose, BORDEAUX combination nozzle (the best general purpose nozzle), also fire nozzle and discharge plug (to make outfit into plumbers' force pump) as illustrated in detail cut.

SHIPPING WEIGHT: The weight, boxed for shipment, is about 30 pounds.

Price List

Fig. 662 — With galvanized tank, (Cipher, KINSHIP)	\$10.00
Fig. 662 — With brass tank. For Bordeaux or Lime-Sulfur solution, (Cipher, KINTAL)	14.00
Seven-foot section of 3/8-inch hose with couplings and pole holder, for "Bucket" and "Knapsack" sprayers, (Cipher, KEDLACK)	2.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



The Deming "Aerospra," Fig. 663
(Patent Pending)

The "Aerospra" is a compressed-air sprayer of improved design with several new and valuable devices on which we have applied for patents. For several years some of our agencies and principal customers have wanted us to put on the market a hand compressed-air sprayer of especial merit. We have devised one with new features of portability which is much appreciated by both the dealer and user. The operator can pump up and spray at rest, until the reduced pressure requires pumping again. The tanks are tested up to 100 pounds pressure — more than twice the pressure which is obtained by the average operator. THE NAME "AEROSPRA" IS A REGISTERED TRADE-MARK.

Specifications

PUMP: Brass tube cylinder, diameter 2 inches, stroke 12 inches. Top cap of tank attached to cylinder. A special rubber-packed flange tightens with the pressure. The locking and carrying clamp is of unique design. The cylinder valve is rubber and is very simple. The pump can be instantly removed for filling the tank.

TANK: MADE EITHER OF THE BEST QUALITY OF GALVANIZED SHEET STEEL OR SHEET BRASS. The carrying straps are wide for ease in handling. The diameter is 7½ inches and height 18½ inches, with about 4 gallons capacity. The tank should be about two-thirds filled; weight, loaded, is about 30 pounds.

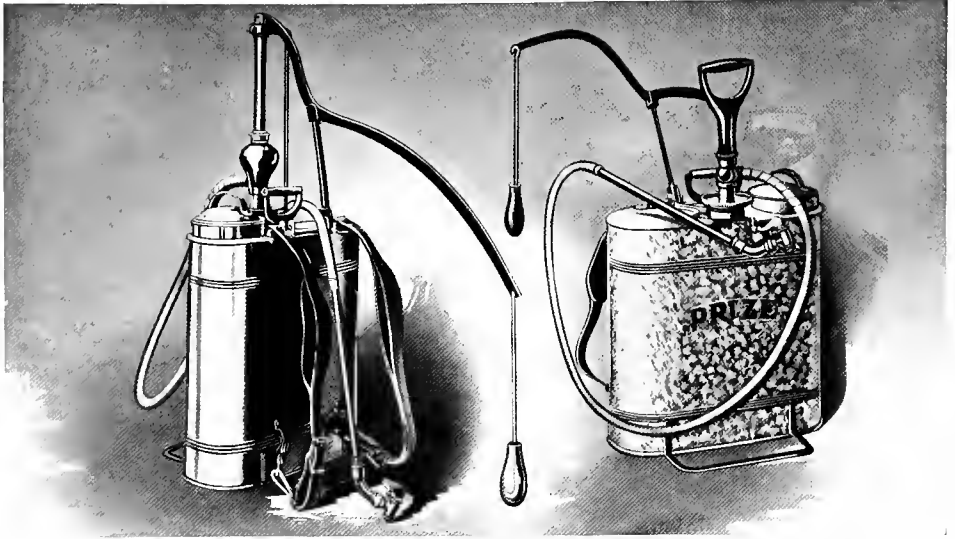
HOSE AND NOZZLE: There is a 3-foot section of ¾-inch hose and an 18-inch hose pipe or lance, with spring-plunger stop cock (Fig. 830, Discharge Controller, page showing attachments), and our "Simplex" spray nozzle. With this discharge controller plunger the flow of liquid may be shut off or controlled.

SHIPPING WEIGHT: When boxed with all parts snugly packed ready for freight or express, the weight is about 20 pounds.

Price List

- Fig. 663 — "Aerospra" with brass air pump and BRASS TANK, as illustrated and described, (Cipher, KOORD) \$12.00
- Fig. 663 — "Aerospra," as above, but with GALVANIZED STEEL TANK, (Cipher, KING) 9.00
- Seven-foot section of ¾-inch hose with couplings and pole holder, for tree spraying, (Cipher, KEDLACK). 2.00

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



The Deming Knapsack Sprayers, Figs. 675, 654

FIG. 675 — The "Success" Knapsack sprayer (the cut to the left) is a useful implement for the florist and grower of vegetables and small fruits. As a vineyard sprayer it is much used, but sprayers of large capacity are now more in use for this purpose. The brass tank is suitable for using lime-sulfur and bordeaux solutions.

FIG. 654 — "Prize" Knapsack sprayer (cut to the right) is similar to Fig. 675, except that the tank is of galvanized iron, and the "Prize" pump is used.

Specifications

PUMP: The working parts are same as the "Prize" and "Success" pumps shown on preceding pages. The cylinder, plunger, valves and valve seats being brass, corrosion and rust are eliminated. The lever is wrought iron and with malleable iron link, steel rod and wood handle.

TANK is of 5 gallons capacity. FIG. 675 HAS BRASS TANK with wide shoulder straps, drip cup for possible leakage, also a wide foot rest for using as a bucket pump and a handle for carrying. A gauze strainer is placed under filling hole. FIG. 654 TANK IS GALVANIZED IRON.

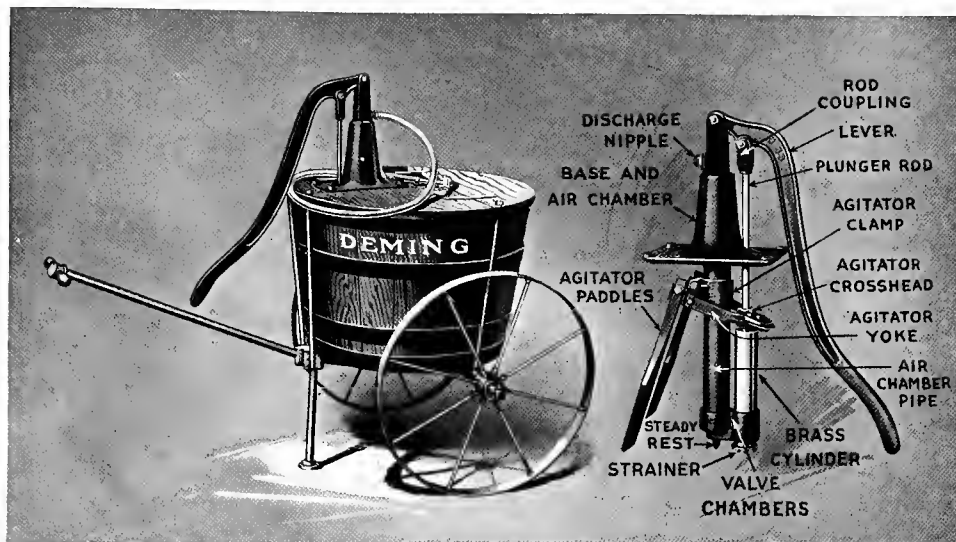
HOSE AND NOZZLE: These outfits have 5 feet of 3/8-inch hose with discharge pipe and undersprayer, Fig. 962, (see page of accessories) and our "Bordeaux" nozzle (see nozzle page).

SHIPPING WEIGHT: The weights boxed for shipment are about 40 pounds.

Price List

Fig. 675 — With brass tank, as described, (Cipher, KETTLE)	\$18.00
Fig. 654 — With galvanized tank, (Cipher, KETCHUP)	10.00
Seven-foot section 3/8-inch hose with couplings and pole holder, for tree spraying, (Cipher, KEDLACK)	2.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



The "Gardener's Choice" Sprayer, Fig. 651

This is one of the most convenient spraying outfits for general use. As an all-round utility sprayer it cannot be beaten. It is particularly adapted for both the garden and greenhouse, also for orchard use, as well as for spraying livestock in the barn and livery stable. It is a splendid whitewashing outfit, as the pump is strong and durable and has a good agitator. The working parts, including agitator, are shown in the sectional view above.

Specifications

PUMP has 1¾-inch brass cylinder, brass ball valves with brass seat and cage, brass plunger and our special plunger packing. The leverage is six to one; can be worked against pressure of 125 pounds. The air chamber is ample, the base adding considerably to the capacity of the pipe air chamber.

AGITATOR: Twin paddle type, simple and effective; stirs the liquid thoroughly.

TANK AND CART: Twenty-four-gallon wood tank with steel hoops and hinged wood top. Leg, tongue and handle of wrought pipe. Metal wheels, diameter 24 inches, with staggered spokes and 2-inch tires. Special axle of wrought iron pipe held by long through bolts. Hub-to-hub measurement, 33 inches. Height to top of tank, 30 inches. Height to top of pump, 42 inches.

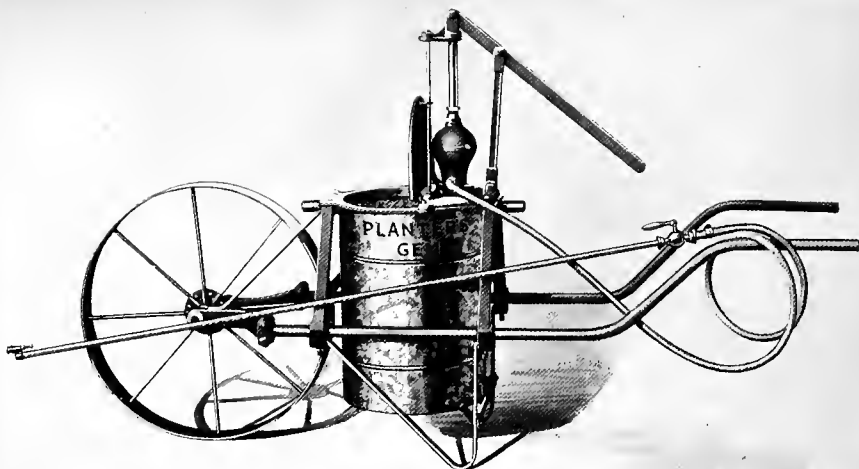
HOSE AND NOZZLE: Six feet of ½-inch "Deco" discharge hose and our "Bordeaux" nozzle are furnished. See list below for extra section of hose.

SHIPPING WEIGHT, including cart, when crated, is about 120 pounds.

Price List

- Fig. 651 — "Gardener's Choice," complete as described, (Cipher, KIDDER) \$20.00
 - Section of ½-inch "Deco" sprayer hose 12½ feet long, with couplings and "Simplex" angle nozzle, (Cipher, KNAVISH) 5.00
- For longer hose add price for extra length. Extension pipes with stop cock, etc., on page representing attachments.

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



The "Planter's Gem" Sprayer, Fig. 821
(Patented)

This is a spraying outfit of the wheelbarrow type, which fills a want among gardeners and planters for a one-man operated sprayer. Nothing of the kind that has ever been put on the market so completely meets this demand. The outfit is well designed and constructed; convenient for the operator; built for durability, and is as light in weight as is consistent with strength of the assembled parts. All working parts of the "Gem" pump coming in contact with the liquid are brass. The hose and discharge pipe are of sufficient length for spraying small trees.

Specifications

PUMP has 1½-inch brass tube cylinder with 4-inch stroke. Air chamber augmented by hollow brass plunger tube. The plunger, valves and valve seats are brass. The lever is steel, with long link which makes operating easy.

AGITATOR: Dash-disc type, operated from rod attached to plunger tube.

TANK: Galvanized or brass, 10 gallons capacity; detachable from frame. Iron top with lid; bottom reinforced.

FRAME: The handles are steel pipe bent to shape, to which are attached the uprights which carry the tank. The axle bearings are clamped to the ends of the handles, thus forming the frame. The whole structure is rigid and is supported by steel braces, a pair of which form the legs on which the outfit rests.

WHEEL: Diameter, 24 inches, with tire 3 inches wide. Hub is welded to axle.

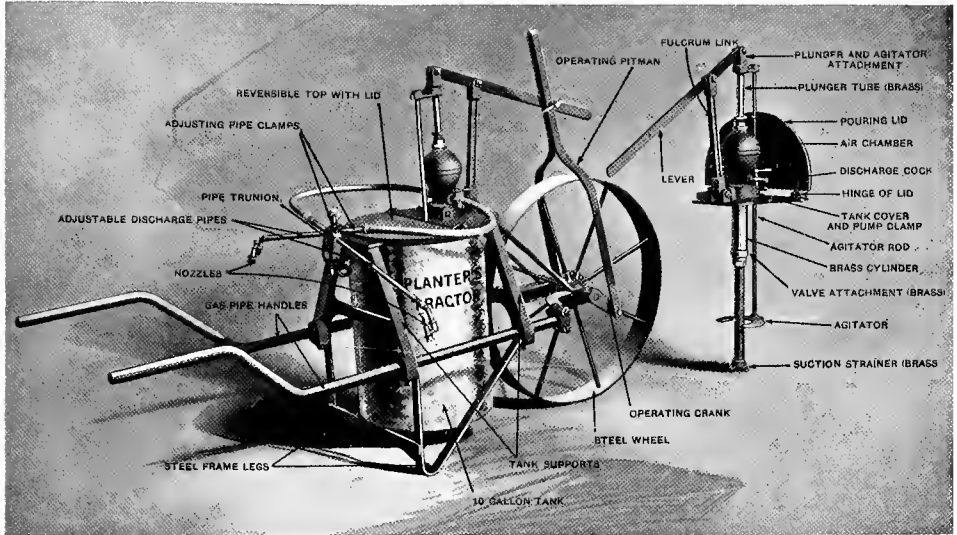
HOSE AND NOZZLE: Ten feet of ¾-inch discharge hose with "Demorel" nozzle and 4-foot spray pipe with stop cock.

SHIPPING WEIGHT, when crated, is about 140 pounds.

Price List

- Fig. 821 — "Planter's Gem," complete as described, with galvanized tank, (Cipher, KICKSHAW) \$20.00
- Fig. 821 — With brass tank for lime-sulphur and Bordeaux, (Cipher, KILLOW) 30.00
- Seven-foot section of ¾-inch hose with couplings and pole holder, (Cipher, KEDLACK) 2.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



The "Planter's Tractor" Sprayer, Fig. 822
(Patented)

For spraying field crops two rows at a time, this is a splendid machine. It is a "one-man power" outfit, in which the pump is automatically operated from the wheel.

WHEN IT IS DESIRED TO SPRAY TREES, the crosshead pin and connecting rod can be removed from the pump lever and the pump operated by hand. If, however, TREE SPRAYING ONLY is to be done the crosshead pin and connecting rod can be removed from the axle and pump lever, respectively, and the pump and tank reversed. This brings the pump lever parallel with the handles, and convenient to the user, who can then attach an extra section of $\frac{3}{8}$ -inch hose and proceed to spray his trees and shrubbery.

Fig. 822 will operate under 40 pounds pressure when pushed along at ordinary speed.

Specifications

Are the same as on preceding page, except for the cranks and connecting rod.

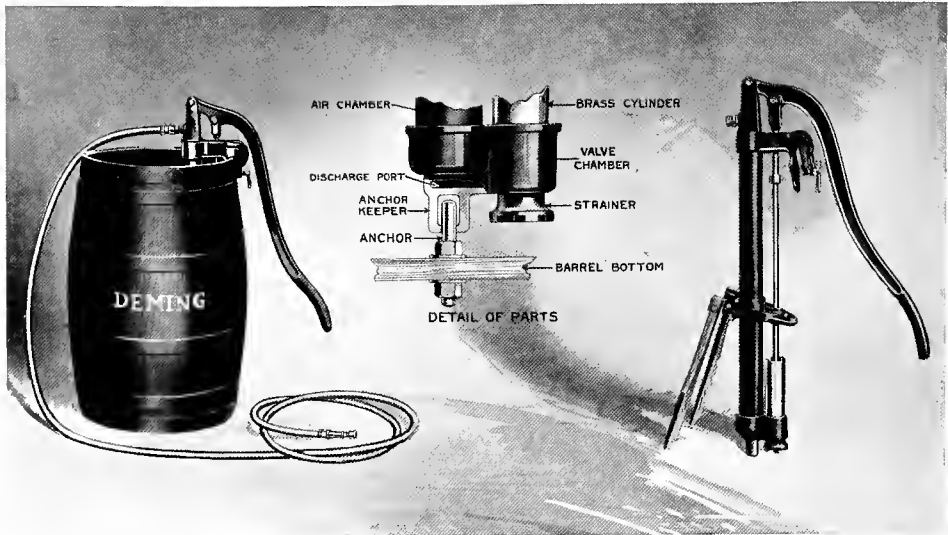
DISCHARGE EQUIPMENT: Two sections of $\frac{3}{8}$ -inch hose 2 feet long; two $\frac{3}{8}$ -inch stop cocks; two $\frac{1}{4}$ -inch hose pipes 18 inches long; two "Demorel" nozzles with angle discharge for rows up to 48 inches apart, forward or backward spray, shorter or taller plants.

SHIPPING WEIGHT, when crated, about 150 pounds.

Price List

Fig. 822 — "Planter's Tractor," complete as described, with galvanized tank, (Cipher, KINGCRAB)	\$25.00
Fig. 822 — "Planter's Tractor," with brass tank, (Cipher, KIRKYARD)	35.00
Fig. 969 — Four-foot extension pipe with stop cock, as on Fig. 821, (Cipher, KID)	2.25
Seven-foot section of $\frac{3}{8}$ -inch hose with couplings and pole holder, for tree spraying, (Cipher, KEDLACK)	2.00

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



The "Captain" Barrel Sprayer, Fig. 632

The "Captain" is the most popular and the best low-price barrel sprayer ever sold for orchard use. It is a splendid pump for the average farmer who has either a young or old family orchard that needs to be sprayed. The compactness, adjustability, efficiency and durability of the pump, commend it to dealers and users alike. THE BARREL IS NOT FURNISHED.

Specifications

PUMP has 1¾-inch brass tube cylinder with brass plunger, brass ball valves, seat and cage, and our special fabric packing. The air chamber is ample in capacity, made of 2¼-inch boiler tubing. Clamps on chime of barrel, anchors at bottom.

AGITATOR: Twin paddle type; simple and effective for stirring liquid.

CYLINDER AND VALVES are brass, as described under head of "Pump," are durable and will not corrode. The submerged cylinder is always primed.

FITTINGS: Gauze strainer prevents sediment from lodging on valve seats. The discharge connection is fitted for one section of ½-inch hose.

SHIPPING WEIGHT: Pump only is about 40 pounds.

Price List

- Fig. 632— "Captain" barrel sprayer only; discharge fits our ½-inch, Fig. 949, hose coupling, (Cipher, KNOLLER) \$ 8.00
- Outfit "A," "Captain" sprayer with one 12½-foot section of ½-inch hose, couplings and "Simplex" nozzle, (Cipher, KNOPPED) 13.00
- Section of ½-inch "Deco" sprayer hose, 12½ feet long, with couplings and "Simplex" nozzle, (Cipher, KNAVISH) 5.00

For longer hose add price for extra length, extension pipes with stop cock and other extras on page showing accessories.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



The "Major" Barrel Sprayer, Fig. 832

The "Major" has become a very popular sprayer. It ranks first among the medium-price barrel sprayers, and has been thoroughly tested out. Its rigidity during operation by anchor in bottom of barrel, is a most desirable feature.

It is a boon to the average farmer who is not engaged extensively in fruit growing. The "Major" is very compact, durable and efficient. THE BARREL IS NOT FURNISHED.

Specifications

PUMP has 2-inch brass-tube cylinder with brass plunger, brass ball valves, seat and cage; and our special fabric packing. The air chamber is ample in capacity, and is made of 2¼-inch boiler tubing. Pump clamps on chime of barrel and has anchor at bottom of barrel, making it very rigid.

AGITATOR: Twin paddle type, simple and effective for stirring liquid.

CYLINDER AND VALVES are brass, as described under head of "Pump;" are durable and will not corrode. The submerged cylinder is always primed. By removing two bolts, both suction and discharge valves may be taken out for either examination or repairs.

FITTINGS: Gauze strainer prevents sediment from lodging on valve seats. The discharge connection is fitted for one section of ½-inch hose.

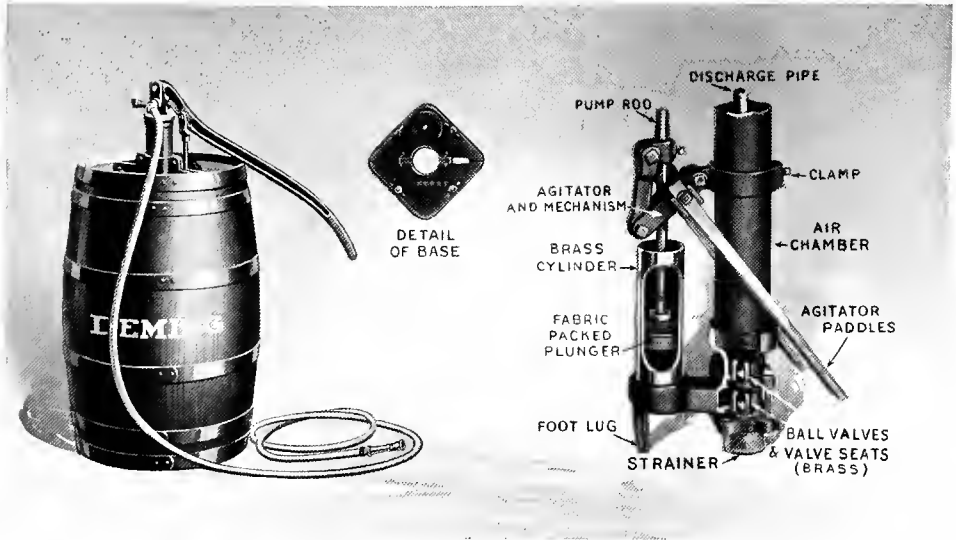
SHIPPING WEIGHT: Pump only is about 50 pounds.

Price List

- Fig. 832 — "Major" sprayer only, discharge fits regular ½-inch female-half hose coupling, Fig. 949, (Cipher, KEEL) \$ 9.00
- Outfit "A" — "Major" sprayer with one 12½-foot section of ½-inch hose, couplings, and "Simplex" angle nozzle, (Cipher, KEELING). 14.00
- Section of ½-inch "Deco" sprayer hose, 12½ feet long, with couplings and "Simplex" angle nozzle, (Cipher, KNAVISH) 5.00

For longer hose, add price for extra length; extension pipes with stop cock and other extras on pages showing accessories.

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



The "Century" Barrel Sprayer, Fig. 645

This outfit is conceded by all experts to be the best all-round barrel sprayer. It took first prize for best barrel sprayer over six competitors at the National Horticultural contest. THE BARREL IS NOT FURNISHED WITH Fig. 645 as listed. See list below of Fig. 1145 (Not illustrated) complete Century Spraying Outfit with barrel on frame with handles.

Specifications

PUMP sets low in barrel. The cylinder is submerged. By removing four bolts the valves and plunger are accessible. The iron base for mounting pump on head of barrel is adjustable. Base fits 10 x 10-inch hole. Curved base for side of barrel if specified. The liquid is poured in a filling hole.

Above is a sectional engraving showing details of the "Century" sprayer.

AGITATOR: Twin paddle type as in the "Major" sprayer.

CYLINDER AND VALVES: Brass tube cylinder, brass ball valves, cage and seat. Valve chambers bolted and easily removed. Special fabric packing. Diameter of cylinder, 2¼ inches. Stroke, 4 inches.

AIR CHAMBER made of 2¾-inch wrought iron casing, 32 inches long.

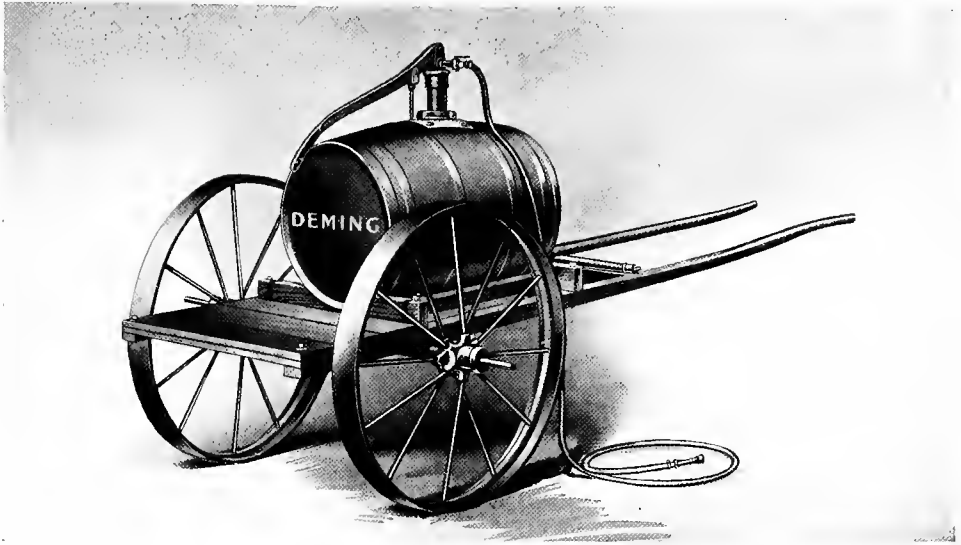
FITTINGS: Gauze suction strainer. Brass discharge "Y," Fig. 364.

SHIPPING WEIGHT, carefully boxed, 75 pounds.

Price List

- Fig. 645 — "Century" barrel sprayer only, with "Y" connection, Fig. 364, (Cipher, KINATE). \$13.50
 - Outfit "A," as above, with one 12½-foot section of ½-inch "Deco" hose, couplings and "Simplex" angle nozzle, (Cipher, KERNISH). 18.50
 - Outfit "B," as above, with two 12½-foot sections of ½-inch "Deco" hose, couplings, and two "Simplex" angle nozzles, (Cipher, KNIGHTLY). 23.50
 - Fig. 1145 — "Complete Spraying Outfit," including "Century" Pump, mounted on side of 50-gallon barrel on frame with handles; 25-foot section of ½-inch "Deco" hose; one 8-foot extension pipe; double spraying attachment and two "Simplex" nozzles. (CIPHER, KNEE) 30.00
 - Section of ½-inch "Deco" sprayer hose, 12½ feet long, with couplings and "Simplex" angle nozzle, (CIPHER, KNAVISH). 5.00
- For longer hose, add price for extra length; extension pipe with stop cocks, and other extras on pages showing accessories.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



The "Farmer's Friend" Sprayer, Fig. 647

The "Farmer's Friend" sprayer, Fig. 647, as illustrated above, is a most convenient implement for either field, vineyard or orchard work. For spraying potatoes our Four-Row Field Sprayer, Fig. 653, may be used. A 50-gallon barrel is set lengthwise in front of and over the axle with a rear platform sufficient in size to accommodate the man operating the pump.

Specifications

PUMP: The "Century" pump with curved base; fits side of barrel. For description of working parts, see preceding pages. Fig. 366 stop cock is provided.

AGITATOR is the twin paddle type, shown in cut of "Century" pump only, on a preceding page. The long wood paddles keep the solution well mixed.

WHEELS AND AXLE: The metal wheels are 44 inches in diameter; width of tire, 3 inches. The axle is 1½-inch steel shafting, 6 feet long. The wheels are adjustable on the axle (center to center of tire) to 46, 50, 54 and 58 inches for spraying rows 23, 25, 27 and 29 inches apart.

TANK AND FRAME: The tank is a 50-gallon barrel set lengthwise on strong wood supports. The shafts and platform are well constructed of hardwood with space for a man to stand on platform for driving and pumping.

HOSE AND NOZZLE: There is a 12½-foot section of ½-inch "Deco" hose and "Simplex" angle spray nozzle.

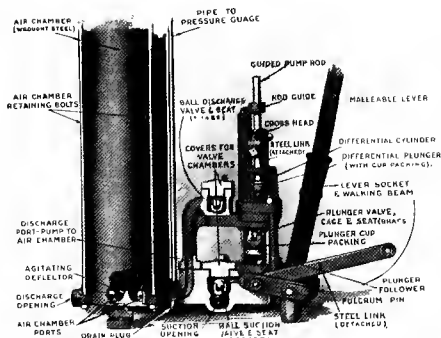
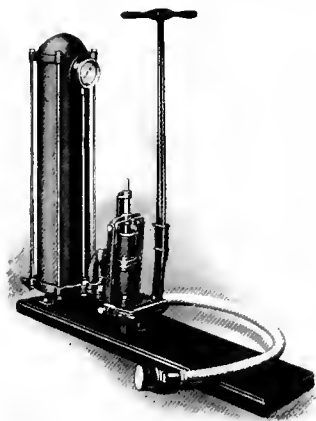
SHIPPING WEIGHT, knocked down and crated, is about 400 pounds.

Price List

Fig. 647 — "Farmer's Friend" sprayer, complete with pump, hose, etc., as illustrated and described, (Cipher, KERNING)	\$50.00
Section of ½-inch "Deco" hose, 12½ feet long, with couplings and "Simplex" angle nozzle, (Cipher, KNAVISH)	5.00

For longer hose add price for extra length. Extra sections of hose with nozzles, etc., extension pipes and stop cocks, etc., on pages showing accessories.

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



The "Samson" Double-Acting Sprayer, Fig. 633 With Large Steel-Tube Air Chamber

Where there are a large number of trees to be sprayed and a heavy pressure is required, the "Samson" is the best hand pump to use. The mechanism is so well balanced that it is not tiresome to pump against a pressure of 100 pounds. The "Samson" has been a decided success and we recommend it to anyone who wants a powerful and durable hand sprayer. The sectional detail cut explains the design and construction of the "Samson" sprayer.

Specifications

PUMP has differential plunger. An equal amount of water is discharged at each stroke. All working parts are accessible and the brass cylinder linings and ball valves can be easily replaced. The long lever makes pumping easy.

CYLINDER is brass lined; the ball valves and other working parts coming in contact with the spraying liquid are also brass. Nothing to corrode.

AIR CHAMBER: Seven gallons capacity. The size makes it easy for the operator, as he can pump and rest alternately.

FITTINGS: Furnished with 10 feet of 1-inch suction hose and strainer, pressure gauge and double discharge attachment, Fig. 364. Discharge hose and nozzles extra, see pages showing nozzles and accessories.

SHIPPING WEIGHT, crated, about 175 pounds.

Price List

Fig. 633 — As illustrated and described, (Cipher, KNOBED)	\$40.00
Twelve and one-half feet of ½-inch "Deco" sprayer hose, with couplings, and "Simplex" angle nozzle, (Cipher, KNAVISH)	5.00
Twenty-five feet of ½-inch "Deco" sprayer hose, with couplings, double spraying attachment, Fig. 980, and two "Simplex" angle nozzles, (Cipher, KESLOP)	10.00
Fifty feet of ½-inch "Deco" sprayer hose, with couplings, double spraying attachment, Fig. 980, and two "Simplex" angle nozzles, (Cipher, KABOB)	16.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



The "Samson" Complete Spraying Outfit, Fig. 933
With Agitator and 50-Gallon Barrel

So many of our customers have requested that our "Samson" pump (FIG. 633, SEE PRECEDING PAGE) be fitted up complete ready for use, that we have constructed Fig. 933 to comply with their desires. This, we consider to be the very best self-contained hand spraying outfit for use where a large number of trees are to be sprayed within a limited period. By mounting the barrel upright on platform, we secure better agitation and greater safety in operation; such an arrangement permits the operator to stand in the center of the wagon while working the pump.

Specifications

PUMP has differential plunger. For complete description of cylinder, air chamber and valves, see opposite page.

AGITATOR: Of the swinging type. Operates from the plunger through cast iron bearings on barrel head. Constructed mainly of iron with two wood paddles.

BARREL: Well hooped and painted. Fifty gallons capacity. Mounted on the same platform with the pump.

PLATFORM: Made of heavy planking; all parts held firmly together with bolts.

HOSE, EXTENSION PIPE AND NOZZLE: Connection from pump to barrel is made with 1-inch suction pipe fitted with strainer. Twenty-five feet of 1/2-inch high pressure, special "Deco" sprayer hose with galvanized iron extension rod 8 feet long (Fig. 970); with rubber hand-hold (Fig. 1170); enclosing lower half of the rod; rubber drip shield (Fig. 1150) on rod; double spraying attachment (Fig. 980), and two "Simplex" angle nozzles. A wrench is also furnished with which to loosen the nuts in the suction pipe and prevent the mixture from siphoning from the pump, should the pump need to stand idle for any considerable time.

SHIPPING WEIGHT, when crated, is about 310 pounds.

Price List

Fig. 933 — Complete with all equipment as above illustrated and described, (Cipher, KECKLE). \$55.00

For longer hose add price for extra length. Extra sections of hose with nozzles, extension pipes and stop cocks, etc., on pages showing accessories.

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



The "Sterling" Complete Spraying Outfit, Fig. 741 With Single-Acting Pump of the Plunger Type

This style of spraying machine having a single-acting pump with horizontal plunger, has been very popular with owners of small and medium-sized orchards. It consists of the pump; 50-gallon barrel, well painted and hooped, with agitator operated from pump lever; all mounted on skids; also suction pipe, discharge hose, extension pipe and nozzles, complete ready to use. This self-contained outfit is very convenient to handle. By mounting the barrel upright on platform, we secure better agitation and greater safety in operation; such an arrangement permits the operator to stand in the center of the wagon while working the pump.

Specifications

PUMP: Single-acting, plunger type; cylinder 2-inch diameter, 4-inch stroke; brass cased, outside packed plunger; brass ball valves; bronze valve seats with guides cast integral, and finished true with seat opening; stuffing box of the nut and gland type with brass gland.

AIR CHAMBER is large and is good for 150 pounds pressure.

SUCTION PIPE: Connection from pump to barrel is made with 1-inch suction pipe fitted with strainer.

VALVE COVERS not screwed, held in place by yoke. Removal of one nut releases the yoke so covers can be lifted off for valve inspection.

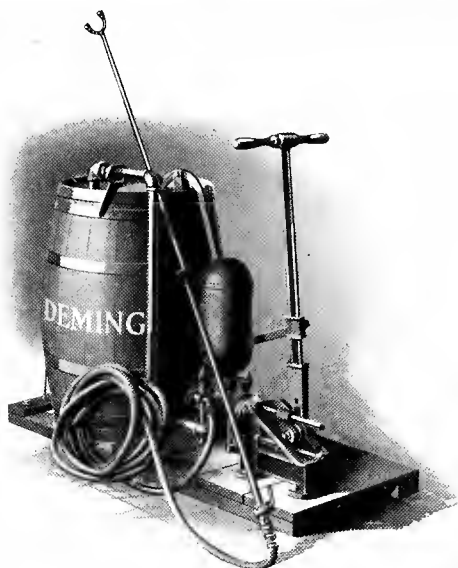
DISCHARGE HOSE, EXTENSION PIPE AND NOZZLES: Twelve and one-half feet of 1/2-inch high pressure, special "Deco" sprayer hose with galvanized iron extension rod, 8 feet long (Fig. 970), with rubber hand-hold (Fig. 1170) enclosing lower half of rod; rubber drip shield (Fig. 1150) on rod; double spraying attachment, and two "Simplex" angle nozzles. A wrench is also included with which to loosen the nuts in the suction pipe and prevent the mixture from siphoning out of the pump, should the pump have to stand idle for any considerable length of time.

Price List

Fig. 741 — "Sterling" complete spraying outfit ready to use, as illustrated and described, (Cipher, KNUB) \$45.00

For longer hose add price for extra length. Extra sections of hose with nozzles, extension pipes with stop cocks, etc., on pages showing accessories.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



The "Planet" Complete Spraying Outfit, Fig. 740

(Pump only is Fig. 763, listed below)

Many fruit growers prefer to purchase a spraying outfit complete with equipment. For the convenience of such users and our dealers we have produced the "Planet" complete spraying outfit. Fig. 740, the "Planet" outfit, is composed of "Planet" spray pump, Fig. 763, No. 1, (listed below), with equipment as illustrated and described.

Specifications

PUMP: Double-acting. The cylinder (2 inches diameter, 5-inch stroke) is reversible so that the suction and discharge connection may be on either side. The piston rod is brass. Removable brass liner. The valves and valve seats are bronze. Fibre piston packing is used. The suction valves are in a separate deck, admitting of their removal.

FITTINGS: One-inch suction pipe with strainer, double discharge attachment, Fig. 364; pressure gauge, one 25-foot section of 1/2-inch "Deco" discharge hose, and spray pipe, Fig. 970, with rubber hand-hold, stop cock and drip shield; also double spraying attachment, Fig. 980, and two "Simplex" angle nozzles. A wrench is also included with which to loosen the nuts in the suction pipe and prevent the mixture from siphoning out of the pump, should the pump have to stand idle for any considerable length of time.

BARREL EQUIPMENT: Fifty gallons capacity; set on end, anchored by rods to a strong skid base or frame. The outfit can be set lengthwise in any wagon.

AGITATOR: This is special for "Planet" outfit, being of the swing paddle type, operated from the lever of pump and hinged to top of barrel.

SHIPPING WEIGHT: The weight of the "Planet" spraying outfit, crated ready for shipping, is about 275 pounds.

Price List, Fig. 740

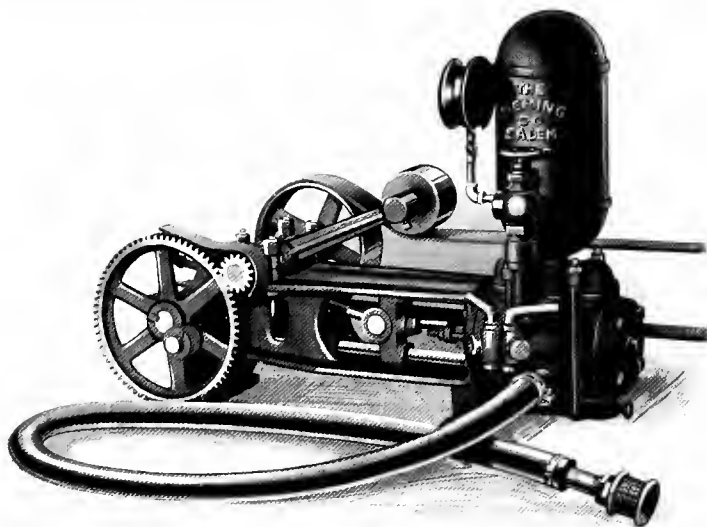
Fig. 740 — "Planet" spraying outfit, AS ILLUSTRATED, (Cipher, KNOUT) \$45.00

For extra sections of hose with couplings, nozzles, etc., see pages showing accessories. With Fig. 366, stop cock, instead of Fig. 364, discharge "Y," \$2.00 extra list.

Price List, Fig. 763

Fig. 763 includes the "Planet" pump only, (as on Fig. 740), but fitted with 10 feet of 1-inch suction hose and strainer, and with stub rod for attaching to pump jack for power.

No.	Diam. Cyl. and Stroke Inches	Horse-power of Engine Recommended	Capacity per Stroke in Gallons	Shipping Weight Pounds	Cipher	Price
1	2 x 5	2	.135	100	KEYSTONE	\$30.00
2	2 1/2 x 5	2 1/2	.213	150	KHALIFF	45.00



Deming Double-Acting Belt-Driven Spray Pump, Fig. 765 For Operation by Any Gasoline Engine

The pump is so made that it will discharge the same quantity of liquid in any position (less than 15 degrees from horizontal), that is discharged in the horizontal position.

SPEED OF PUMP SHOULD NOT EXCEED 60 COMPLETE STROKES PER MINUTE. THIS PUMP IS GOOD FOR 200 POUNDS PRESSURE.

Specifications

CYLINDER is reversible, so suction and discharge pipes may be arranged for either side. Bored for removable brass liner; tapped for suction and discharge pipes.

VALVES: Bronze balls; cannot rust or be eaten out. Seats, cast bronze, removable.

PISTON PACKING: Special fibre cup packing; will resist mixtures.

AIR CHAMBER: Very large; removable to give easy access to discharge valves.

SUCTION VALVE DECK is removable, to give access to suction valves.

BED PLATE: Designed so as to attach easily to sub-base or wooden platform.

GEARS: Ratio 5 to 1. Machine cut from the solid, not cast teeth.

PULLEYS: Fitted regularly with belt tightener of gravity type, as illustrated.

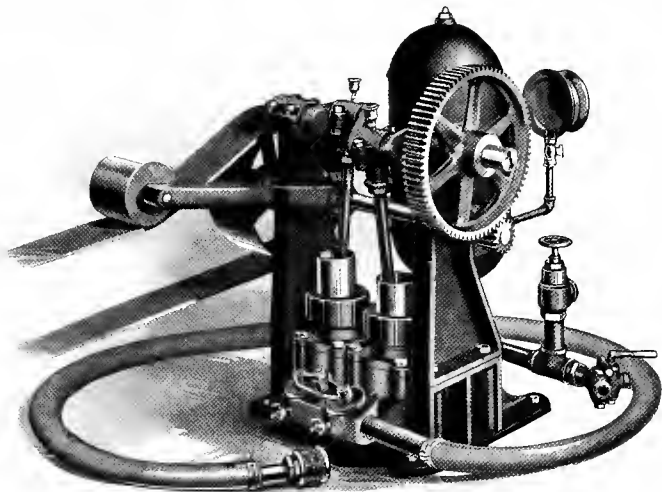
FITTINGS: Ten feet of 1-inch suction hose, strainer, pressure gauge, relief valve and double discharge cock, Fig. 366. Nos. 1 and 2 have 1-inch suction fitting; No. 3, 1¼-inch.

NOZZLES, DISCHARGE HOSE, ETC.: Furnished at extra cost. See pages showing nozzles and accessories.

Price List

No.	Revolutions per Minute	Diam. Cyl. and Stroke Inches	Horse-power of Engine Recommended	Size Pulley	Capacity per Rev. in Gallons	Shipping Weight Pounds	Cipher	Price
1	50	2 x 5	2	8 x 4	.136	225	KELD	\$ 60.00
2	50	2½ x 5	2½	16 x 4	.213	300	KELK	80.00
3	50	3 x 5	3½ to 4	16 x 4	.306	335	KELLER	100.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



“Duplex” Outside-Packed Plunger Pump, Fig. 761

For Operation by Any Gasoline Engine

This pump has two cylinders. It possesses none of the faults common to this type and will operate at any angle; less than 15 degrees from the horizontal. Some other makes have pockets in the port passages in which air collects and prevents the pump from discharging its rated capacity at high pressure when spraying on hillsides. Fig. 761 is made in two sizes to operate against 200 pounds pressure.

Specifications

CYLINDERS are independent and removable. Air chamber of large capacity.

PLUNGERS are brass; highly finished.

CRANK SHAFT: Finest drop forged steel, with bearings accurately ground.

VALVES: Bronze balls; seats cast bronze, removable; covers not screwed.

STUFFING BOXES of the nut and gland type, with brass glands.

BEARINGS: Babbitted and all fitted with oil pockets.

FITTINGS: Ten feet of 1-inch suction hose, with strainer, pressure gauge, relief valve and double discharge cock, Fig. 366.

SUCTION VALVES accessible by removing one nut; likewise discharge valves.

OPERATED by belt from any gasoline engine. Belt tightener furnished. Geared 5 to 1. Pulley can be changed to suit different engine speeds.

BASE AND COLUMNS are separate castings, which reduces cost of repairs.

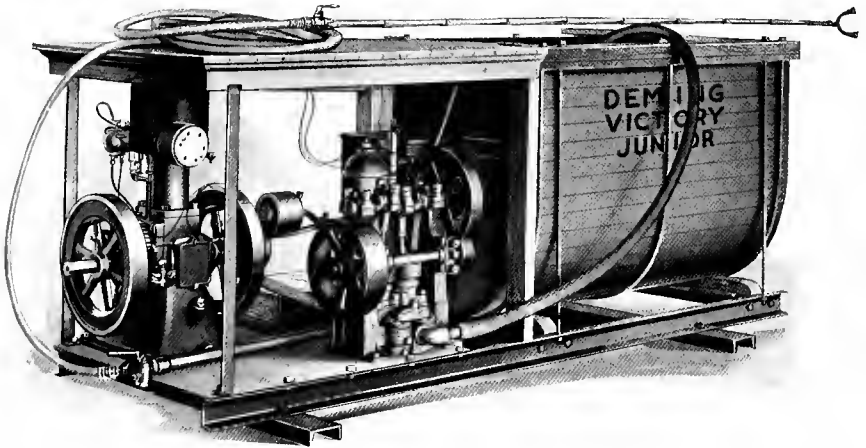
NOZZLES, DISCHARGE HOSE, ETC., furnished at extra cost. See pages showing nozzles and accessories.

This pump is used with power sprayers, Figs. 729, 730 and 736.

Sizes, Capacities, Prices, Etc.

No.	Maximum Revs. per Minute	Diameter Cylinder and Stroke Inches	Horse-power of Engine Recommended	Capacity per Minute at 70 Revs. Gallons	Shipping Weight Pounds	Size Pulleys	Cipher	Price
1	70	2 x 2 1/2	2	4 3/4	225	12 x 3	KYAN	\$ 80.00
2	70	2 1/2 x 3 1/2	3	10 1/2	310	14 x 4	KEYAGE	100.00

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



The Deming "Victory Junior" — View from right side

The "Victory Junior" Power Sprayer, Fig. 729 With 125-Gallon Tank

The "Victory Junior" has demonstrated its value as a light weight, powerful sprayer. It weighs but 1000 pounds with empty tank and is especially well adapted to soft or hilly ground.

The pump is connected to the tank with 10 feet of 1-inch suction hose which goes over the top of the tank. This suction hose is fitted with a brass strainer which sets on the bottom of the tank between the agitator paddles. Because the strainer is so close to the agitator paddles, clogging troubles are practically eliminated.

The relief valve is so constructed that the gritty particles in the mixture will not score it. Some other styles of relief valves will be scored so much as to be worthless after a few hours' work.

In general the specifications for Fig. 729 "Victory-Junior" are much the same as the "Victory," see following pages, except that the outfit is constructed throughout on a smaller scale, the pump having a capacity of 4 gallons per minute.

This duplex plunger pump (Fig. 761, No. 1) has many advantages. The plungers can be repacked while in the orchard with ordinary hemp or flax packing. The valve covers are not screwed in, but are HELD IN PLACE BY A YOKE. This yoke can be removed by unscrewing one nut. The valve covers can then be lifted out, exposing the suction valves. The discharge valves are of the same construction. Loss by slippage and leakage around the plunger are not liable to occur. The pump should run an entire season without repacking, which will save a great deal of valuable time during spraying operations.

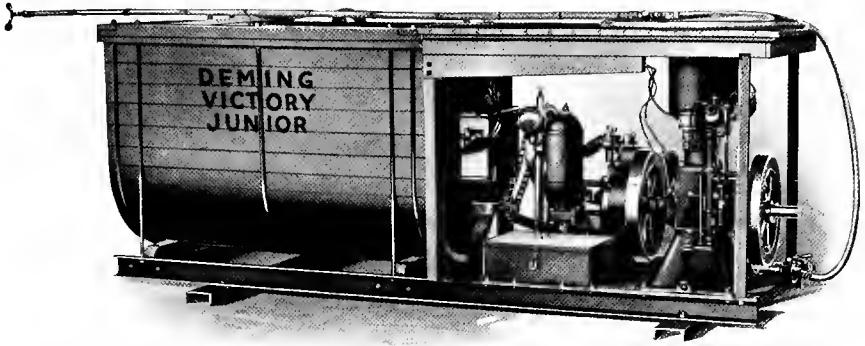
Fig. 729 is arranged with adjustable bolster pieces to fit any wagon truck. This does away with the expense of a special truck used only on the spraying machine.

The "Victory-Junior" power sprayer is made from the very best of materials and no expense has been spared to make it the VERY BEST light-weight power sprayer on the market to operate at 200 pounds pressure. COMPLETE SPECIFICATIONS OF THE "VICTORY JUNIOR" WILL BE FOUND ON THE FOLLOWING PAGE. WE FURNISH SHUT-OFF IN SUCTION PIPE WHICH CAN BE CLOSED WHEN GOING FROM ONE TREE TO ANOTHER, THEREBY RELIEVING PUMP AND RELIEF VALVE FROM STRAIN OF PUMPING AGAINST HIGH PRESSURE.

Price List

Fig. 729 — Deming "Victory-Junior" power sprayer as per illustrations, descriptions and specifications. This includes complete equipment consisting of one 25-foot section of "Deco" sprayer hose, one Fig. 751 brass-lined bamboo extension pipe 10 feet long, one Fig. 980 double spraying attachment, and two "Simplex" angle nozzles, (Cipher, KNUR)\$225.00
For extra lengths of hose, also nozzles, etc., see pages showing nozzles and accessories.

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The Deming "Victory Junior" — View from left side

Specifications of the "Victory Junior" Sprayer Pump (Fig. 761, No. 1)

CYLINDERS are independent and removable.
 AIR CHAMBER: Extra large capacity, mounted on the pump.
 PLUNGERS: Brass; 2-inch diameter, 2½-inch stroke.
 VALVE SEATS are cast bronze with valve guide finished true with seat opening.
 VALVES: Bronze balls, cannot rust out.
 STUFFING BOXES: Nut and gland type, brass gland; beveled packing seat.
 CRANK SHAFT: Finest steel drop forging; bearings are highly finished by grinding.
 GEARS: High grade grey iron casting, teeth cut from the solid.
 PINION: Open hearth steel, teeth cut from the solid.
 BEARINGS: Babbitted and supplied with oil pockets.
 BASE AND COLUMNS: Separate castings, reduce repair cost. No air pockets.
 BELT TIGHTENER: Gravity type of proper weight to safeguard pump.
 CAPACITY AND SPEED: At 60 revolutions of pump per minute, 4 gallons.
 PRESSURE: Built for 200 pounds pressure to the square inch.

Engine

POWER: Two horse-power Novo Special gasoline engine, belted to pump.
 OPERATION: Four-cycle type. Automatic hit-and-miss governor.
 SPEED: Revolutions per minute, 600; but can be changed while engine is running.
 CARBURETOR: Vertical poppet type. No delicate parts.
 COOLING SYSTEM: Hopper type; guaranteed against breakage from freezing.
 IGNITION: Jump spark; reliable.

Tank, Frame, Etc.

TANK: Cypress, the best material for the purpose. Hooped with ½-inch iron rod. Top has manhole (with box strainer) for filling and access to agitator. Capacity, 125 gallons.
 FRAME: Side pieces and cross ties of channel iron. Tank bolted to frame in saddles.
 Pump and engine are mounted on a sheet steel platform.
 CAB TOP: Hinged to the top of tank.
 AGITATOR: Propeller type; operated direct by sprocket wheel and chain.

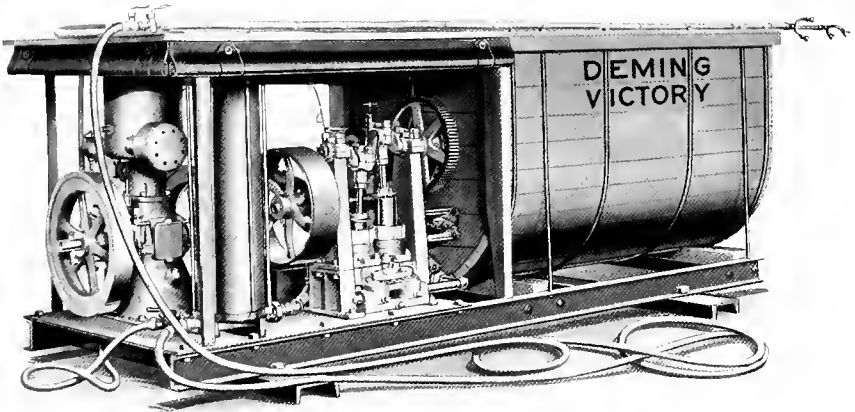
Equipment

SUCTION HOSE: Ten feet of 1-inch hose.
 DISCHARGE COCK: Fig. 366 attached to discharge pipe.
 DISCHARGE HOSE, ETC.: One 25-foot section of ½-inch "Deco" hose with Fig. 980 and two "Simplex" angle nozzles; one Fig. 751 bamboo extension pipe.
 RELIEF VALVE: Fig. 1526; sensitive and reliable. Regulates pressure.
 PRESSURE GAUGE: Fig. 688, on discharge from pump, near relief valve.
 TOOL BOX: With oil can, monkey wrench and spanner for stuffing box of pump.

Weight

NET WEIGHT: With entire spraying equipment is about 1,000 pounds.
 SHIPPING WEIGHT: When properly crated, is about 1,200 pounds.

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



The Deming "Victory" Outfit — View from right side

The Deming "Victory" Power Sprayer, Fig. 730 With 200-Gallon Tank

After making and successfully marketing several power spraying rigs we have learned to know what to make, and how to make it. The "Victory" power sprayer is not the design of one man, but our salesmen, our engineers, and our draftsmen have assisted the factory manager in producing an outfit that possesses every desirable practical feature of the ideal sprayer. It is substantial in construction, pleasing in design, convenient for operating, and is durable and efficient, meeting the demands of the most exacting orchardists.

The engine and pump are the best that can be made. A season's spraying can be done with this outfit without having to repack the pump. The Novo Special 3-horse-power, water-cooled gasoline engine of the hopper type is used. The pump is of the geared duplex type with outside packed plungers. This is our FIG. 761 No. 2 PUMP with a special air chamber of more than double the usual capacity in such pumps.

Since the tank has a capacity of 200 gallons it must be provided with strong, rigid frame and adjustable bolster pieces. These points are arranged so the outfit will set on a wagon truck the purchaser may possess. A special suction box with shut-off valve and clean-out strainer is provided. The propeller agitator is operated direct from the crank shaft of pump by sprocket and chain.

The advantages of this duplex plunger pump are paramount. Experience of many years in making all kinds of power pumps has taught us that the duplex outside packed plunger pump is the very best power sprayer, in that there are but two plungers and two sets of valves instead of three, as in the triplex pump. This lessens the friction and gives less trouble in repacking. It otherwise has all the advantages of the triplex pump.

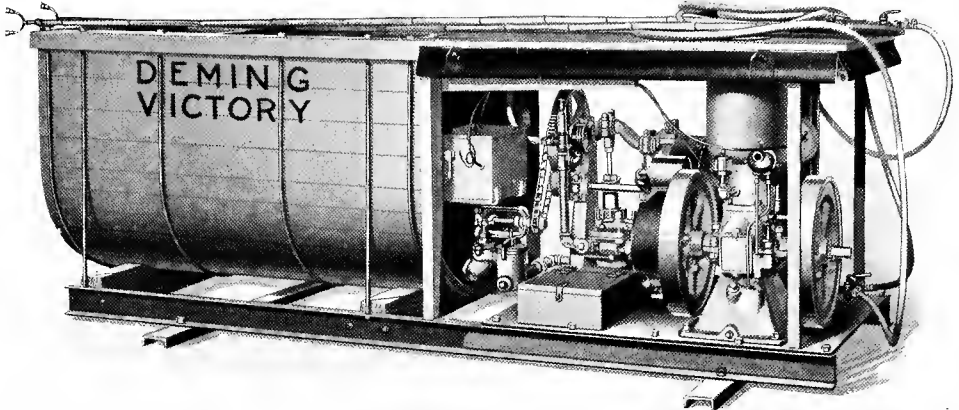
Repacking of the plungers can be done while in the orchard, with ordinary hemp or flax packing; the valves are easy of access from the outside. Loss by slippage and leakage around the plunger are not liable to occur. This plunger pump should run an entire season without repacking, thus saving much valuable time during spraying operations.

The additional cost of this duplex plunger pump is more than saved in one season's spraying, by the saving of time and in addition the trouble is eliminated. In the "Victory" outfit we have accomplished our aim to produce at a reasonable price a DURABLE AND EFFICIENT POWER SPRAYER, good for 200 pounds pressure. WE FURNISH SHUT-OFF IN SUCTION PIPE WHICH CAN BE CLOSED WHEN GOING FROM ONE TREE TO ANOTHER, THEREBY RELIEVING PUMP AND RELIEF VALVE FROM STRAIN OF PUMPING AGAINST HIGH PRESSURE.

Price List

Fig. 730 — The Deming "Victory" power sprayer as per illustrations, description and specifications. This includes complete equipment consisting of two 25-foot sections of "Deco" sprayer hose, each with Fig. 751 bamboo 10-foot extension pipe, Fig. 980 double spraying attachment, and two "Simplex" angle nozzles, (Cipher, KILLAS) \$300.00
Hydraulic Filler (Fig. 791), as an accessory for the power sprayer, is shown on page showing accessories. Additional nozzles and spraying accessories on pages representing those articles. Complete specifications of the Deming "Victory" Power Sprayer and its component parts will be found on the following page.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



The Deming "Victory" Outfit — View from left side

Specifications of the "Victory" Power Sprayer Pump (Fig. 761, No. 2)

CYLINDERS are independent and removable.

AIR CHAMBER: Extra large capacity steel tube mounted separate from pump.

PLUNGERS: Special bronze castings; 2½-inch diameter, 3½-inch stroke.

VALVES: Bronze balls; cannot rust out. Bronze valve guides and seats.

STUFFING BOXES: Nut and gland type, deep brass gland, beveled packing seat.

CRANK SHAFT: Finest steel drop forging; bearings are highly finished by grinding.

GEARS: High grade grey iron casting, teeth cut from the solid.

PINION: Open hearth steel, teeth cut from the solid.

BEARINGS: Babbitted and supplied with oil pockets.

BASE AND COLUMNS: Separate castings, reduce repair cost. No air pockets.

BELT TIGHTENER: Gravity type of proper weight to safeguard pump.

CAPACITY AND SPEED: At 60 revolutions of pump per minute, 8.9 gallons.

PRESSURE: Built for 200 pounds pressure to the square inch.

Engine

POWER: Three horse-power Novo Special gasoline engine, belted to pump.

OPERATION: Four-cycle type. Automatic, hit and miss governor.

SPEED: Revolutions per minute, 525; but can be changed while engine is running.

CARBURETOR: Vertical poppet type. No delicate parts.

COOLING SYSTEM: Hopper type; guaranteed against breakage from freezing.

IGNITION: Jump spark; reliable.

Tank, Frame, Etc.

TANK: Cypress, the best material for the purpose. Hooped with ½-inch iron rod. Top has manhole (with box strainer) for filling and access to agitator. Capacity, 200 gallons.

FRAME: Side pieces and cross ties of channel iron. Tank bolted to frame in saddles. Pump and engine are mounted on a sheet steel platform.

CAB TOP: Hinged to top of tank. Sides have roll curtains to protect machinery.

AGITATOR: Propeller type; operated direct by sprocket wheel and chain.

SUCTION BOX: At bottom end of tank; has shut-off and cap over clean-out strainer.

Hose connection on side for Hydraulic Filler, Fig. 791, shown on page of accessories.

Equipment

DISCHARGE COCK: One Fig. 366 attached to base of the special air chamber.

DISCHARGE HOSE, ETC.: Two 25-foot sections of ½-inch "Deco" hose each with Fig. 980, and two "Simplex" angle nozzles. Two Fig. 751 bamboo extensions.

RELIEF VALVE: Fig. 1526; sensitive and reliable. Regulates pressure.

PRESSURE GAUGE: Fig. 688, on discharge from pump, near relief valve.

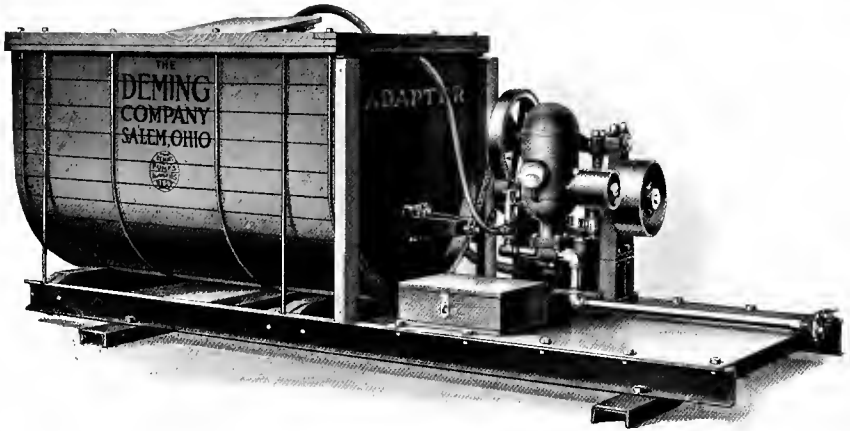
TOOL BOX: With oil can, monkey wrench and spanner for stuffing box of pump.

Weight

NET WEIGHT: With entire spraying equipment, is about 1,400 pounds.

SHIPPING WEIGHT: When properly crated, is about 1,600 pounds.

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



The "Adapter" Power Sprayer, Fig. 736

Built in two sizes. Cut shows No. 2

Implement dealers, hardware men and dealers in farm engines generally have been so insistent in their demand for a power sprayer that can be used with the engines they handle, that we have brought out this outfit which we call the "Adapter," Fig. 736, illustrated above. ON REQUEST, WE WILL FURNISH SKETCH SHOWING SPACE AVAILABLE FOR BASE OF ENGINE.

This outfit we have designed in two sizes suitable for either gasoline or oil engine of 1½ to 3½ horse-power. The pumps, Figs. 761, Nos. 1 and 2, are built for 200 pounds pressure. The flat steel platform permits the use of any regular engine.

The following equipment is to be supplied by customer: Gasoline engine, also discharge hose, extension pipes, nozzles, etc., as shown on pages representing accessories.

Specifications

PUMP: Fig. 761, Nos. 1 and 2. For sizes, see table below. Cylinders are independent and removable; air chamber of large capacity; plungers brass.

CRANK SHAFT: Finest drop forged steel, accurately finished.

BELT TIGHTENER: Gravity type.

VALVES AND SEATS: Bronze balls; seats cast bronze, removable.

STUFFING BOXES: Of nut and gland type, with brass glands.

BEARINGS: Babbitted and supplied with oil pockets.

EQUIPMENT: Ten feet 1-inch suction hose and strainer, relief valve, pressure gauge, discharge pipe to rear platform, and three-way discharge cock.

TANK: No. 1, 125 gallons; No. 2, 200 gallons; both have propeller agitator.

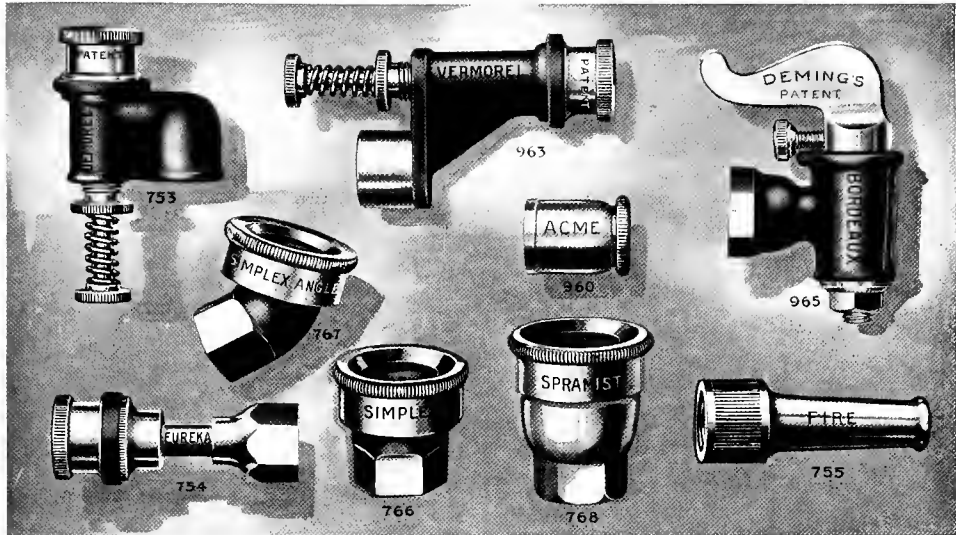
FRAME: Steel channels with flat steel platform, mounted complete as shown.

AGITATOR: Propeller type, operated by sprocket-wheel and chain.

Sizes, Capacities, Prices, Etc.

No.	Pump Diam. of Cyl. and Stroke Inches	Maximum Revs per. Minute	Capacity per Minute at 70 Revs. Gallons	Horse-power of Engine Recommended	Shipping Weight Pounds	Size Pulleys	Cipher	Price
1	2 x 2½	70	4¾	2	900	8 x 4	KNELT	\$150.00
2	2½ x 3½	70	10½	3	1200	16 x 4	KOWTOW	175.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



The Deming Spraying Nozzles

THE MANUFACTURE OF SPRAY NOZZLES requires great care in the machine work. Special machinery and tools enable us to make perfect nozzles. Perfect brass castings only are used and EVERY NOZZLE IS TESTED before it leaves our works.

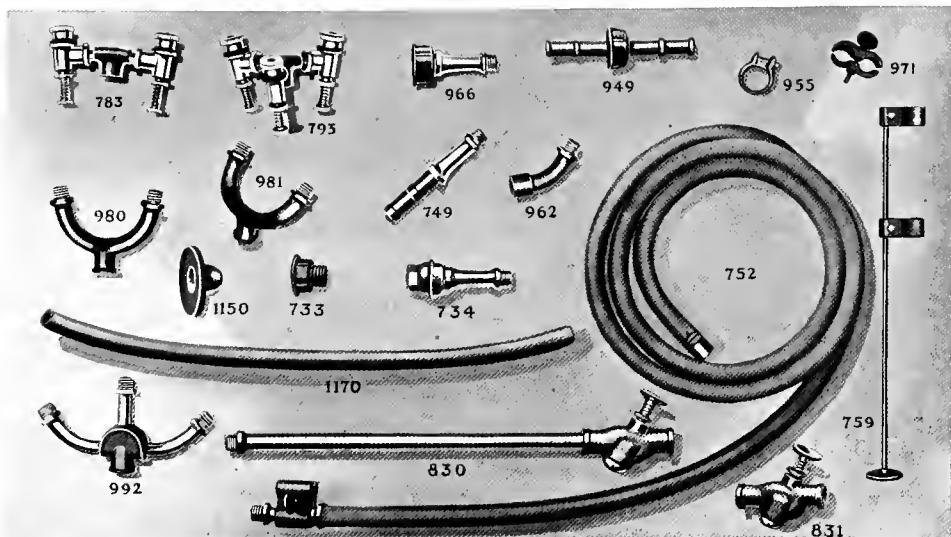
A SPRAYER'S EFFICIENCY IS IN THE NOZZLE — THE "BUSINESS END." Without a good nozzle any spraying outfit is inefficient. The Deming patent spray nozzles, shown above, are "The World's Best." They can be used with any spray pump.

HOW DEMING NOZZLES ARE PUT UP: — All the DEMING NOZZLES illustrated above are put up in individual paper boxes except the last two types, Figs. 960 and 755, as listed below. Complete directions for using the nozzles are printed on each nozzle box. The "BORDEAUX" patent nozzle, when so ordered, is put up for dealers in cartons containing a dozen nozzles.

Price List

- Fig. 965 — "Bordeaux" is furnished with many of our sprayers. It is the best general purpose spray nozzle ever produced. Throws a solid stream, coarse long-distance spray, or a fine mist; or it may be shut off. It is an excellent nozzle, also for whitewashing, disinfecting, etc. Easily disgorge. THE NAME "BORDEAUX" IS A REGISTERED TRADE-MARK. (CIPHER, KEEPSAKE) \$1.00
- Fig. 963 — "Vermorel," with caps for fine and coarse sprays. Furnished on kerosene sprayers. Obstructions readily forced out with spring disgorger. Steel caps, instead of brass, when specified. (PATENTED.) (CIPHER, KEFFEL) 1.00
- Fig. 753 — "Demorel," similar to "Vermorel," but somewhat lighter in weight, with caps for fine and coarse sprays. Steel caps, instead of brass, when ordered. (PATENTED.) (CIPHER, KERONA)75
- Fig. 766 — "Simplex," light, durable and compact. Adapted for high pressure. Has two interchangeable steel spray discs, one coarse and one medium-fine spray. Does not waste liquid. (CIPHER, KEMPT)75
- Fig. 767 — "Simplex" angle nozzle, similar to Fig. 766. (CIPHER, KILT)75
- Fig. 768 — "Spramist" nozzle with cup-shaped, removable strainer, otherwise similar to the "Simplex" nozzle, Fig. 766. CIPHER, KLEPHT) 1.25
- Fig. 754 — "Eureka," throws conical-shaped spray; disgorges by pushing against fence or tree. A good whitewasher. (CIPHER, KNITCH)75
- Fig. 960 — "Acme," will throw a solid stream or a fine spray. Furnished on "Prize" bucket sprayers. (CIPHER, KELPIE)50
- Fig. 755 — Fire Nozzle, for fire protection, washing windows, buggies, etc., furnished with "Universal Success" sprayer, Fig. 662. (CIPHER, KNITCHET)50

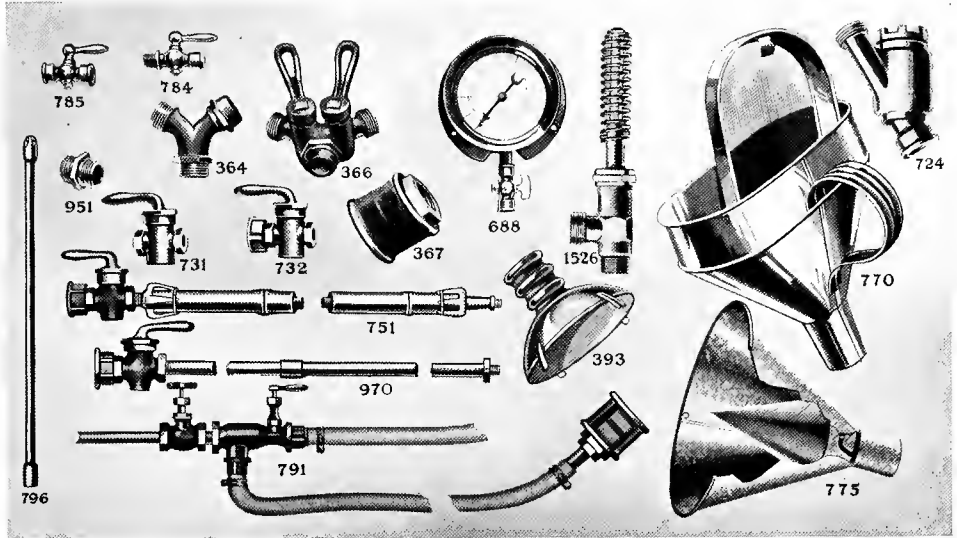
Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Deming Spraying Accessories

Fig. 783	— Double Nozzle group ("Demorel"); aluminum body. (Cipher, KYANIZING)	\$ 2.00
Fig. 793	— Triple Nozzle group, general description as above. (Cipher, KYANOL)	3.00
Fig. 949	— Brass Hose Coupling	{ 3/8-inch. (Cipher, KEELMAN) 15
		{ 1/2-inch. (Cipher, KEELSON) 20
Fig. 949	— Special for high pressure	{ 3/8-inch. (Cipher, KEELVAT) 45
		{ 1/2-inch. (Cipher, KEELRAKE) 60
Fig. 749	— Nozzle coupling and hose stock, 1/4-inch male pipe thread; other end for either 3/8-inch or 1/2-inch hose, as specified. (Cipher, KEYNOTE)	.25
Fig. 733	— Short combination coupling; large end, female 1/2-inch hose coupling, (Fig. 949), small end, 1/4-inch pipe. (Cipher, KINGLESS)	.20
Fig. 966	— Combination coupling; large end, threaded 1/2-inch female hose coupling, (Fig. 949), otherwise like Fig. 749. (Cipher, KEYHOLE)	.30
Fig. 980	— Double Spraying Attachment; fits Fig. 749, etc. (Cipher, KREOSOTE)	.50
Fig. 981	— Angle Attachment similar to Fig. 980 ("Melander Crook") — guides spray, helps sustain weight of pole. (Cipher, KNICKER)	.75
Fig. 734	— Strainer Attachment for spray nozzles. (Cipher, KINGCUP)	.75
Fig. 1150	— Rubber Drip Shield. (Cipher, KARAGANE)	.20
Fig. 1170	— Rubber Hand-hold, 4 feet long, for Fig. 970. (Cipher, KALMIA)	.50
Fig. 992	— Triple Spraying attachment. (Cipher, KYANIZED)	1.25
Fig. 962	— Underspraying Angle attachment. (Cipher, KYANITE)	.25
Fig. 955	— Hose Clamp for 1/2-inch hose; per dozen. (Cipher, KEENER)	.75
Fig. 759	— Dash Agitator for "Success" pumps; easily attached. (Cipher, KINGLING)	1.50
Fig. 971	— Pole Holder, clamps on Figs. 749 and 966. (Cipher, KRULLER)	.25
Fig. 831	— Discharge Controller for Bucket Sprayers, etc. (Cipher, Kecklich)	1.50
Fig. 830	— Discharge Controller with Lance, used on Fig. 663. (Cipher, KECKLE)	1.75
	Extra list per foot for longer than 18 inches	.15
Fig. 752	— Seven-ft. section 3/8-in. hose with pole holder and couplings. (Cipher, LEDLACK)	2.00
DIS- CHARGE HOSE SECTIONS	{ 12 1/2-foot section of 1/2-inch "Deco" sprayer hose, couplings and "Simplex" angle nozzle. (Cipher, KNAVISH)	5.00
	{ 25-foot section of 1/2-inch "Deco" hose, with couplings, double attachment and two "Simplex" angle nozzles. (Cipher, KESLOP)	10.00
	{ 50-foot section of 1/2-inch "Deco" sprayer hose; couplings, double spraying attachment; two "Simplex" angle nozzles. (Cipher, KABOB)	16.00
RUBBER HOSE	{ "Deco" sprayer hose, 1/2-inch, for 250 pounds pressure, per foot	.25
	{ Rubber tubing, 3/8-inch, for Bucket and Knapsack sprayers, per foot	.15
	{ Wire-lined suction hose, 1-inch, in 10-foot sections	5.00

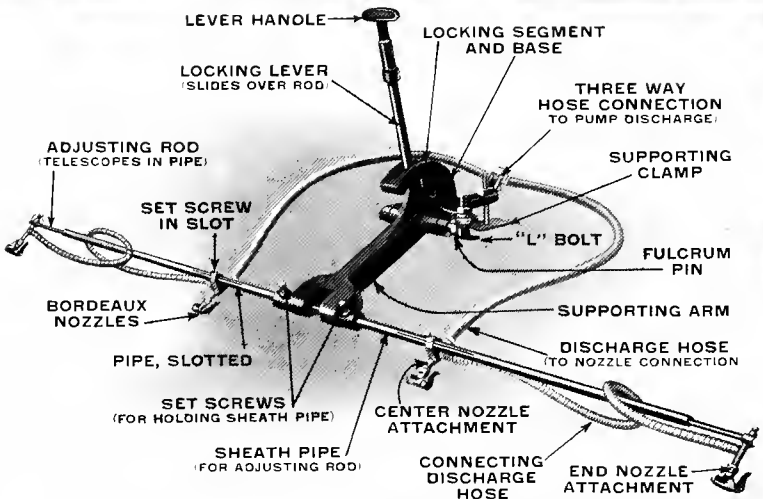
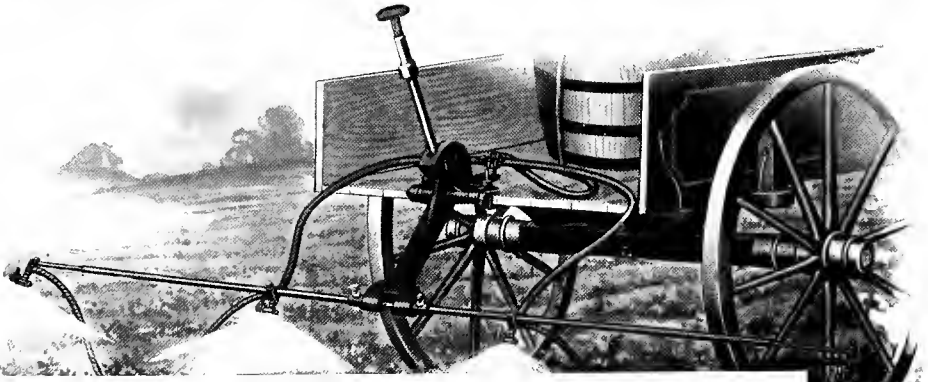
Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



Deming Spraying Accessories

- Fig. 784 — Brass Stop Cock, 1/4-inch pipe thread, male and female. (Cipher, KNITSTER) \$ 1.00
- Fig. 785 — Brass Stop Cock, 1/4-inch, both ends female thread. (Cipher, KYLEY) . . . 1.00
- Fig. 364 — Discharge "Y," without cock. Cap on one end. (Cipher, KRALL) . . . 1.00
- Fig. 366 — Double Discharge Stop Cock, single end, 3/4-inch pipe; double end, 1/2-inch hose thread. (Cipher, KESTREL) . . . 3.00
- Fig. 731 — Leakless Stop Cock, 1/4-inch pipe thread at both ends; used on spray extension pipes. Water-way full 1/4-inch pipe size. (Cipher, KINDLER) . . . 1.25
- Fig. 732 — Leakless Stop Cock, 1/4-inch pipe thread one end; other end, 1/2-inch female hose thread. (Cipher, KINGHOOD) . . . 1.50
- Fig. 688 — Pressure Gauge, used on power sprayers and largest hand sprayers. For 1/4-inch pipe. (Cipher, KAMSIN) . . . 4.00
- Fig. 367 — Galvanized, Gauze Strainer for 1-inch pipe. (Cipher, KANTIST)75
- Fig. 393 — Bell-shaped Strainer for suction hose. For 1-inch hose. (Cipher, Kibe) . . 1.50
For 1 1/4-inch hose. (Cipher, KIPSKIN) . . . 2.00
- Fig. 1526 — "Special" Brass Adjustable Relief Valve for power sprayers. (Cipher, KYLOES) 5.00
- Fig. 951 — Brass Hose Nipples for 3/4-inch male pipe, one end; other end, 1/2-inch male hose thread. (Cipher, KANTIAN)30
- Fig. 751 — Bamboo Extension Pipe, 10 feet long, light and strong. Brass lined, with leakless stop cock. (Cipher, KALENDER) . . . 5.00
Extra list per foot for longer than 10 feet40
- Fig. 791 — Hydraulic Tank Filler; one 10-foot section of 1-inch wire-lined suction hose; one 8-foot section of 1-inch discharge hose, globe valve, ejector valve, and strainer, complete as illustrated. (Cipher, KHENNA) . . . 15.00
- Fig. 970 — Spray Pipe Extension with leakless stop cock, iron pipe, 8 feet long, galvanized. See rubber handhold, Fig. 1170. (Cipher, KALAND) . . . 2.50
Extra list per foot for longer than 8 feet15
- Fig. 770 — Filling Funnel, with removable brass Gauze Strainer, size 10 x 6 x 10 inches (high), brass. (Cipher, KYMNEL)4.00
Funnel as above, tin. (Cipher, KYTHE)2.00
- Fig. 775 — Galvanized Filling Funnel, with removable strainer. Size, 12 inches diameter; 11 inches deep. (Cipher, KNAP)2.00
- Fig. 724 — Hose-protection strainer with clean-out cap. Attaches between discharge of pump and hose. For power and large hand sprayers. (Cipher, KITTLISH) . . 3.00
- Fig. 796 — Veterinary Syringe Nozzle, made of brass, nickel-plated; recommended by Veterinary Surgeons. (Cipher, KNAVE)3.00

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



The Deming Four-Row Field Sprayer, Fig. 653

For spraying potatoes, strawberries, small nursery stock, cotton fields, etc., this is a very convenient device, as it is easily and quickly attached to any wagon.

The nozzle holders can be adjusted to rows of any width from 22 to 40 inches for forward or backward spraying. They may be raised or lowered and brought together to pass through gate. ANY HAND OR POWER SPRAYER WITH 1/2-INCH DISCHARGE HOSE CAN BE USED.

Specifications

ATTACHMENT: For any wagon or cart. Can be securely clamped on with set screws and bolts which are furnished.

ADJUSTMENT: Height for spraying and width of rows can be easily arranged by the lock lever. Width of rows from 22 to 40 inches.

HOSE AND NOZZLES: There are two sections of 3/8-inch hose connecting to the outer nozzles and two sections of 1/2-inch hose connecting to coupling in center, to which discharge hose of pump is attached. Four "Bordeaux" nozzles are used.

SHIPPING WEIGHT: Partially crated to prevent breakage, is about 50 pounds.

Price List

Fig. 653 — With four "Bordeaux" nozzles and hose sections, also coupling for discharge hose connecting to pump as per detail engraving. (Cipher, KATYDID)	\$15.00
Section of 1/2-inch "Deco" sprayer hose, 8 feet long, with couplings for attaching field sprayer to discharge of spray pump. (Cipher, KANTRY)	2.00

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



REPAIRS
OR
EXTRA PARTS

FOR

HAND AND POWER PUMPS

EMBRACING DESCRIPTIVE
TABULATED PRICE LISTS OF
EXTRA PARTS FOR DEMING
HAND, WINDMILL AND POWER
PUMPS, IRON AND BRASS
CYLINDERS, SPRAY PUMPS, ETC.
A CONVENIENCE TO DEALERS
AND USERS. PRICES ON RE-
PAIRS NOT LISTED FUR-
NISHED ON REQUEST





REPAIRS OR EXTRA PARTS

The repair parts listed in this section embrace our most popular hand and windmill pumps; iron and brass cylinders, hydraulic rams, power pumps, spray pumps, etc.

If repairs are desired for a pump not given in this repair list, we should be informed concerning the symbol number which is cast on the pump part; and any other details such as descriptive diagram, weight, etc. The comprehensive figure index below will make it possible to quickly find the page on which the desired repairs are listed.

FIGURE INDEX TO REPAIR PARTS

Table with 8 columns: FIGURE, PAGE, FIGURE, PAGE, FIGURE, PAGE, FIGURE, PAGE. Lists various pump parts and their corresponding page numbers.

"DOMESTIC" KITCHEN PUMP, FIG. 102

Table with 2 columns: NAME OF PART, PRICE. Lists parts for the Domestic Kitchen Pump and their prices.

BRASS CYLINDER PITCHER SPOUT PUMPS, FIGS. 101 AND 115

Table with 4 columns: FIGURE NUMBER, PRICE, FIGURE NUMBER, PRICE. Lists parts for Brass Cylinder Pitcher Spout Pumps and their prices.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



HAND AND POWER PUMPS FOR ALL USES



PITCHER SPOUT PUMPS, FIGS. 125, 126 AND 128

SIZE NUMBERS	1	2	3	4	5	6
Cylinders, Iron	\$1.00	\$1.10	\$1.20	\$1.60	\$2.00	\$3.50
Cylinders Brass-lined	2.00	2.25	2.75	3.00	4.25	7.50
Bearer	.40	.40	.50	.50	.65	1.25
Lever	.30	.30	.40	.40	.40	1.00
Base, Figs. 125 and 126	.60	.65	.80	.90	1.75	2.75
Base, Fig. 128	.90	.95	1.00	1.50	2.00	2.50
Base Nut, Figs. 125 and 126	.20	.20	.20	.25	.50	.75
Brass Tube Valve Seat, Fig. 128	.90	1.35	1.50	2.00	2.75	3.75
Plunger only	.45	.55	.65	.85	1.25	2.00
Plunger Rod	.10	.10	.10	.10	.10	.10
Valve Weight and Screw	.06	.06	.07	.10	.10	.20

CISTERN PUMPS, FIGS. 120 AND 124

SIZE NUMBERS	1	2	3	4	5	6	8
Cylinder, Fig. 120, Iron	\$1.75	\$1.75	\$2.00	\$2.25	\$2.50	\$2.75	\$4.50
Cylinder, Fig. 120, Brass-lined	2.75	2.75	3.25	4.00	5.00	6.00	8.00
Cylinder, Fig. 124, Iron	2.25	2.25	2.50	2.75	3.00	3.50	5.00
Cylinder, Fig. 124, Brass-lined	3.25	3.25	3.75	4.50	5.50	6.75	8.50
Base, Fig. 120	.75	.75	.85	1.00	1.25	1.50	1.75
Base, Fig. 124	.50	.50	.50	.65	.75	.85	1.00
Bearer	.40	.40	.50	.60	.70	.85	1.00
Lever	.50	.50	.50	.60	.70	.75	.75
Base Nut	.15	.15	.15	.20	.20	.30	.40
Brass Suction Tube for Iron Pipe	.60	.75	.75	.95	.95	1.25	2.00
Galv. Suction Tube for Iron Pipe	.15	.20	.20	.25	.25	.35	.50
Brass Tube for Lead Pipe	.25	.35	.35	.45	.45	.65	1.15
Galvanized Tube for Lead Pipe	.15	.15	.15	.20	.20	.25	...
Plunger only	.40	.45	.50	.55	.60	.65	.85
Plunger Rod	.12	.12	.12	.15	.15	.15	.20
Valve Weight and Screw	.06	.06	.06	.06	.07	.07	.10

SPECIAL CISTERN FORCE PUMPS WITH BRASS CYLINDERS, FIGS. 518 AND 519

FIGURE NUMBER	518	519	FIGURE NUMBER	518	519
Cylinder, Brass	\$2.25	\$2.25	Spout for Fig. 518	\$0.35	.....
Top Section	.85	1.10	Cock Spout for Fig. 519	.....	\$2.00
Air Chamber, Fig. 519	.....	1.00	Plunger Rod, Brass Cased	.60	.60
Stuffing-box Gland	.35	.35	Rod End or Cross Head	.15	.15
Lever	.40	.40	Plunger only	.55	.55
Fulcrum or Link	.50	.50	Cylinder Ring	.30	.30
Base	1.25	1.25	Valve Weight and Screw	.06	.06
Base Nut	.20	.20			

"BLUE SPECIAL" HOUSE FORCE PUMP, FIG. 516

NAME OF PART	PRICE	NAME OF PART	PRICE
Brass Cylinder	\$1.00	Base	\$1.00
Spout Section	1.15	Cock Spout with Coupling Nut	2.50
Air Chamber	1.85	Coupling Nut for Cock Spout	.25
Air Chamber Gland	.50	Plunger	.55
Lever	1.00	Plunger Rod, Brass Cased	.85
Fulcrum Rod (Pipe), only	.30	Plunger Rod Cross Head	.25
Fulcrum Rod Cross Head, each	.15	Valve Weight and Screw	.06
Cylinder Ring	.35		

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THE DEMING COMPANY, SALEM, OHIO, U. S. A.



HAND FORCE PUMPS, FIGS. 502, 503, 508 AND 509

SIZE NUMBER	0	2	4	6	8
Cylinders, Iron, Figs. 502 and 508	\$3.00	\$3.25	\$3.75	\$4.50	\$5.25
Cylinders, Iron, Figs. 503 and 509	3.75	4.00	4.50	5.25	6.00
Cylinders, Brass-lined, Figs. 502 and 508	4.00	4.50	5.50	7.00	8.25
Cylinders, Brass-lined, Figs. 503 and 509	4.75	5.25	6.25	7.75	9.00
Funnel Attachment, Figs. 502 and 503 . . . . .	.50	.50	.50	.75	.75
Air Chamber, Figs. 508 and 509	2.50	2.50	2.50	3.00	3.00
Stuffing-box Cap . . . . .	.35	.35	.40	.50	.50
Stuffing-box gland . . . . .	.50	.50	.50	.50	.50
Bearer	1.00	1.00	1.25	1.50	1.50
Lever	1.00	1.00	1.00	1.25	1.25
Cross Head . . . . .	.35	.35	.35	.35	.35
Links for Cross Head, per pair . . . . .	.15	.15	.15	.15	.15
Bases for Figs. 502 and 508	1.00	1.10	1.25	1.50	1.75
Bottom Flange, Figs. 503 and 509 . . . . .	.50	.50	.55	.65	.75
Suction and Discharge Nuts, each . . . . .	.15	.15	.15	.20	.30
Brass Tubes for Iron Pipe . . . . .	.75	.75	.75	.95	2.00
Cock Spout with Coupling Nut	2.50	2.50	2.50	2.75	2.75
Coupling Nut for Cock Spout . . . . .	.25	.25	.25	.35	.35
Plunger only . . . . .	.40	.45	.55	.65	.85
Plunger Rod, Brass Cased . . . . .	.85	.85	.85	1.00	1.00
Valve Weight and Screw . . . . .	.06	.06	.06	.07	.10
Plank for Figs. 503 and 509	1.25	1.25	1.25	1.25	1.25

SPECIAL ANTI-FREEZING WELL PUMPS, FIGS. 198, 298, 398 AND 199

FIGURE NUMBER.	198	298	398	199	FIGURE NUMBER.	198	298	398	199
Stock or Standard only	\$3.00	\$3.00	\$3.00	\$3.00	Gear Guard		\$0.45		
Bearer . . . . .	.50	1.50	1.00	1.00	Plunger Rod Coup'g	\$0.30	.30	\$0.75	\$0.75
Lever . . . . .	.75	1.00	.75	.75	Rod Eye . . . . .	.15			.15
Rack . . . . .		.25			Brace . . . . .	.25	.25	.25	.25
					Link . . . . .			.25	.10

ADJUSTABLE STANDARD LIFT AND FORCE PUMPS, FIGS. 182, 382, 482 AND 192

FIGURE NUMBER.	182	382	482	192	FIGURE NUMBER.	182	382	482	192
Spout Casting	\$1.25	\$1.25	\$1.25	\$4.00	Brace	\$0.25	\$0.25	\$0.25	\$0.25
Bearer . . . . .	.50	1.00	1.50	1.00	Plunger Rod . . . . .	.30	.75	.30	.75
Bearer Link . . . . .		.25			Rack . . . . .			.25	
Lever . . . . .	.75	1.00	1.00	1.25	Gear Guard . . . . .			.45	
Stuffing-box Cap . . . . .				.35	Plunger Rod Eye . . . . .	.15			
Stuffing-box Gland . . . . .				.50	Cross Head . . . . .				.35
Base . . . . .	.75	.75	.75	.75	Cross Head Links, per pair . . . . .				.15
Brace Ring . . . . .	.20	.20	.20	.25					

LIFT AND FORCE PUMPS, FIGS. 166 AND 185

FIGURE NUMBER.	166	185	FIGURE NUMBER.	166	185
Spout Section	\$1.50	\$3.25	Base	\$1.25	\$0.75
Bearer	1.00	1.50	Stuffing-box Nut . . . . .		.50
Lever . . . . .	.75	1.25	Stuffing-box Gland . . . . .		.50
Plunger Rod30	.75	Brace40
Rod Eye20		Brace Ring40
Cross Head50	Bearing Pins, each15
Link25			

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HAND AND POWER PUMPS FOR ALL USES



ANTI-FREEZING WELL PUMPS, FIGS. 210, 211, 212, 213, 214, 215, 420, 421 AND 423

FIGURE NUMBER	210	211	212	213	214	215	420	421	423
Stock or Standard only	\$3.50	\$4.00	\$4.50	\$3.50	\$4.00	\$4.50	\$3.50	\$4.00	\$4.50
Bearer . . . . .	.90	1.00	1.10	1.00	1.25	1.50	1.25	1.50	1.75
Bearer Link . . . . .							.25	.25	.25
Lever	1.25	1.25	1.25	1.25	1.25	1.25	1.00	1.00	1.00
Plunger Rod . . . . .	.35	.35	.35	1.00	1.00	1.00	.90	.90	.90
Cross Head for Rod . . . . .	.20	.20	.20	.35	.35	.35	.....	.....	.....
Links for Cross Head, per pair . . . . .				.15	.15	.15	.....	.....	.....
Brace . . . . .	.25	.25	.25	.25	.25	.25	.25	.25	.25
Malleable Crimp Pin . . . . .							.10	.10	.10
Steel Pins with Cotters . . . . .							.15	.15	.15

"PREMIUM" HAND FORCE PUMPS, FIGS. 290 AND 291

FIGURE NUMBER	290	291	FIGURE NUMBER	290	291
Air Chamber	\$4.00	\$6.00	Stuffing-box Gland	\$0.50	\$0.50
Bearer with Bolt . . . . .	.60	.60	Base	1.00	2.00
Rod Links, each . . . . .	.25	.25	Brace . . . . .	.35	.35
Lever Links, each . . . . .	.30	.30	Brace Ring . . . . .	.25	.50
Cross Head . . . . .	.25	.25	Cock Spout . . . . .	.....	2.50
Wood Lever . . . . .	.50	.50	Plunger Rod	1.00	1.00
Handle Ball . . . . .	.50	.50	Cross Head Pin . . . . .	.15	.15

"PEERLESS" DOUBLE-ACTING HAND PUMPS

FIGURE NUMBER	280 and 281			282		283	
	2	4	6	2	4	2	4
Stock	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00
Lever	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Spout . . . . .	.60	.60	1.00	.60	.60	1.00	1.00
Spout Nut . . . . .	.15	.15	.15	.15	.15	.15	.15
Union Coupling for Spout . . . . .	.25	.25	.30	.25	.25	.....	.....
Hose Tube, Malleable . . . . .	.05	.05	.05	.05	.05	.05	.05
Pipe Clamps in Base, per pair . . . . .	.15	.15	.15	.15	.15	.15	.15
Head or Cylinder Castings, Iron	1.25	.....	2.00	.....	.....	1.50	1.50
Head or Cylinder Casting (Mall.) . . . . .	.....	1.50	.....	.....	.....	.....	.....
Differential Cylinder Tube	1.50	2.00	2.50	.....	.....	1.50	2.00
Differential Cylinder Plunger . . . . .	.35	.40	.60	.35	.40	.35	.40
Differential Cylinder with Cap . . . . .	.....	.....	.....	7.00	7.50	.....	.....
Plunger Rod . . . . .	.50	.50	.50	.75	.75	1.00	1.00
Eye for Plunger Rod . . . . .	.20	.20	.20	.20	.20	.20	.20
Cap for Air Chamber Pipe . . . . .	.20	.20	.20	.20	.20	.20	.20
Steel Pins with Cotters, each . . . . .	.15	.15	.15	.15	.15	.15	.15
Shut-off Rod . . . . .	.....	.....	.....	.....	.....	1.00	1.00
Hand Wheel and Screw . . . . .	.....	.....	.....	.....	.....	.50	.50
Stuffing-box Gland . . . . .	.....	.....	.....	.....	.....	.50	.50
Lower Half of Three-way Casting . . . . .	.....	.....	.....	.....	.....	2.00	2.00
Upper Half of Three-way Casting . . . . .	.....	.....	.....	.....	.....	1.35	1.35
Brass Disc for Three-way Valve . . . . .	.....	.....	.....	.....	.....	.60	.60
Rubber Gaskets for Three-way Valve, each20	.20
Nut for Three-way Discharge20	.20
Brass Discharge Three-way Tube60	.60

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THE DEMING COMPANY, SALEM, OHIO, U. S. A.



"PEERLESS" DOUBLE-ACTING PUMPS WITH PLAIN WINDMILL TOP

FIGURE NUMBER	450 & 451			452		453	
	2	4	6	2	4	2	4
Stock	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50
Lever . . . . .	.75	.75	.75	.75	.75	.75	.75
Bearer Link . . . . .	.25	.25	.25	.25	.25	.25	.25
Spout . . . . .	.60	.60	1.00	.60	.60	1.00	1.00
Spout Nut . . . . .	.15	.15	.15	.15	.15	.15	.15
Malleable Hose Tube . . . . .	.05	.05	.05	.05	.05	.05	.05
Union Coupling for Spout . . . . .	.25	.25	.30	.25	.25	. . . . .	. . . . .
Pipe Clamp in Base, per pair . . . . .	.15	.15	.15	.15	.15	.15	.15
Head or Cylinder Casting, Iron	1.25	. . . . .	2.00	. . . . .	. . . . .	1.50	1.50
Head or Cylinder Casting, Malleable . . . . .	. . . . .	1.50	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .
Differential Cylinder Tube	1.50	2.00	2.50	. . . . .	. . . . .	1.50	2.00
Plunger for Differential Cylinder . . . . .	.35	.40	.60	.35	.40	.35	.40
Differential Cylinder with Cap . . . . .	. . . . .	. . . . .	. . . . .	7.00	7.50	. . . . .	. . . . .
Upper Plunger Rod . . . . .	.85	.85	.85	.60	.60	.85	.85
Lower Plunger Rod . . . . .	.25	.25	.25	.50	.50	.25	.25
Caps for Air Chamber Pipe . . . . .	.20	.20	.20	.20	.20	.20	.20
Steel Pins with Cotters . . . . .	.15	.15	.15	.15	.15	.15	.15
Malleable Pump Pins . . . . .	.10	.10	.10	.10	.10	.10	.10
Shut-off Rod . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	1.00	1.00
Hand Wheel and Screw . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	.50	.50
Stuffing-box Gland . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	.50	.50
Lower Half of Three-way Casting . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	2.00	2.00
Upper Half of Three-way Casting . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	1.35	1.35
Brass Disc for Three-way Valve . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	.60	.60
*Rubber Gaskets for 3-way Valve, ea. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	.20	.20
*Nut for Three-way Discharge . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	.20	.20
*Brass Tube for Three-way Discharge . . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	.60	.60

"PEERLESS" WINDMILL PUMPS WITH COG LEVER TOPS

FIGURE NUMBER	450 ¹ / ₂ , 451 ¹ / ₂ & 452 ¹ / ₂			453 ¹ / ₂
	2	4	6	2 & 4
Stock	\$6.00	\$6.00	\$6.00	\$6.00
Lever	1.25	1.25	1.25	1.25
Gear Guard . . . . .	.45	.45	.45	.45
Rack on Plunger Rod . . . . .	.40	.40	.40	.45
Spout . . . . .	.60	.60	1.00	1.00
Spout Nut . . . . .	.15	.15	.15	.15
Malleable Hose Tube . . . . .	.05	.05	.05	.05
Union Coupling for Spout . . . . .	.25	.25	.30	. . . . .
Pipe Clamp in Base, per pair . . . . .	.15	.15	.15	.15
Head or Cylinder Casting, Iron	1.25	. . . . .	2.00	1.50
Head or Cylinder Casting, Malleable . . . . .	. . . . .	1.50	. . . . .	. . . . .
Differential Cylinder Tube	1.50	2.00	2.50	2.00
Plunger for Differential Cylinder . . . . .	.35	.40	.60	.40
Differential Cylinder with Cap	7.00	7.50	. . . . .	. . . . .
Upper Plunger Rod . . . . .	.60	.60	.60	.60
Lower Plunger Rod . . . . .	.50	.50	.50	.50
Caps for Air Chamber Pipe . . . . .	.20	.20	.20	.20
Steel Pins with Cotters . . . . .	.15	.15	.15	.15
Malleable Pump Pins . . . . .	.10	.10	.10	.10
Shut-off Rod . . . . .	. . . . .	. . . . .	. . . . .	1.00
Hand Wheel and Screw . . . . .	. . . . .	. . . . .	. . . . .	.50
Stuffing-box Gland . . . . .	. . . . .	. . . . .	. . . . .	.50
Lower Half of Three-way Casting . . . . .	. . . . .	. . . . .	. . . . .	2.00
Upper Half of Three-way Casting . . . . .	. . . . .	. . . . .	. . . . .	1.35
Brass Disc for Three-way Valve . . . . .	. . . . .	. . . . .	. . . . .	.60

*Same prices as for Fig. 453. (See the last three items in table above this one.)

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HAND AND POWER PUMPS FOR ALL USES



HAND AND WINDMILL STANDARDS, FIGS. 224, 228 AND 403

FIGURE NUMBER	224			228			403		
	3	4	5	3	4	5	3	4	5
Stock	\$3.50	\$4.00	\$4.50	\$3.50	\$4.00	\$4.50	\$3.50	\$4.00	\$4.50
Bearer	.90	1.00	1.10	1.00	1.25	1.50			
Bearer 6"							1.25	1.50	1.75
Bearer 10"							1.50	1.75	2.00
Bearer Link 6"							.25	.25	.25
Bearer Link 10"							.35	.35	.35
Lever	1.25	1.25	1.25	1.25	1.25	1.25			
Lever 6"							1.00	1.00	1.00
Lever 10"							1.25	1.25	1.25
Plunger Rod	.30	.30	.30	.85	.85	.85	.50	.50	.50
Cross Head for Rod	.20	.20	.20	.35	.35	.35			
Links for Cross Head, per pair				.15	.15	.15			
Brace	.25	.25	.25	.25	.25	.25	.25	.25	.25
Malleable Pump Pin							.10	.10	.10
Steel Pins with Cotters							.15	.15	.15

WINDMILL PUMP STANDARDS, FIGS. 440, 444 AND 444½

STROKE, INCHES	6			10			ADJ. 6, 8 or 10		
	6	10	ADJ. 6, 8 or 10	6	10	ADJ. 6, 8 or 10	6	10	ADJ. 6, 8 or 10
Stock or Standard only	\$1.75	\$1.75	\$1.75						
Bearer	1.75	2.00	2.00						
Bearer Link	.35	.50	.50						
Lever	1.00	1.25	1.50						
Lever for Fig. 444½	1.25								
Rack on Rod, Fig. 444½	.40								
Gear Guard, Fig. 444½	.45								
Bearer Ring	.25	.25	.25						
Bearer Tube	.50	.50	.50						
Gland	.50	.50	.50						
Spout for Fig. 440	.75	.75	.75						
Cock Spout for Figs. 444 and 444½				\$2.50	\$2.50	\$2.50			
Spout Nut				.20	.20	.20			
Malleable Hose Tube				.05	.05	.05			
Flat Rod				.50	.60	.60			
Round Rod				.50	.60	.60			
Flat and Round Rod Couplings				.25	.25	.25			
Malleable Pump Pin				.10	.10	.10			
Link Pin (Steel), each				.15	.15	.15			
Brace				.25	.25	.25			
Combination Bushing, 2 to 1½ to 1¼ inches.				.50	.50	.50			

THREE-WAY WINDMILL FORCE PUMPS, FIGS. 410, 410½, 415 AND 415½

STROKE, INCHES	6		ADJUST. 6, 8, 10		STROKE, INCHES	6		ADJUST. 6, 8, 10	
	6	ADJUST. 6, 8, 10	6	ADJUST. 6, 8, 10		6	ADJUST. 6, 8, 10	6	ADJUST. 6, 8, 10
Standard Complete with Lever, Bearer, etc.	\$ 8.50	\$ 9.50			Platform Base only	\$2.00	\$2.00		
Stock or Standard only	4.00	4.00			Platform Guide Plate	.15	.15		
Bearer	1.25	1.50			Hydrant Spout	1.00	1.00		
Link	.25	.35			Spout Nut	.15	.15		
Lever	1.00	1.25			Malleable Hose Tube	.05	.05		
Brace	.50	.50			Valve Screw in Hydrant Top	.50	.50		
Flat Rod	.50	.60			Spout Gland	.50	.50		
Malleable Pump Pin	.10	.10			Shut-off Rod	2.00	2.00		
Link Pins, each	.15	.15			Brass Cased Rod	.75	1.00		
Bottom Section Complete with Hydrant Top	17.50	18.00			Center Rod	.45	.45		
Bottom Section only	1.25	1.25			Air Chamber Pipe, Fig. 410	1.75	1.75		
Stuffing-box Cap	.50	.50			Air Chamber Pipe, Fig. 415	1.25	1.25		
Stuffing-box Gland	.40	.40			Discharge Pipe	1.50	1.50		
Pipe Sleeve Valve Rod Guide	.75	.75			Wood Rod Coupling	.20	.20		
Brass Disc for Two-way Valve	.60	.60			Union for Rod	.20	.20		
Rubber Valves for Two-way, each	.20	.20			Differential Cylinder, Figs. 410½ and 415½	1.50	2.00		
Pipe Sleeve Lock Nut	.15	.15			Differential Cylinder Cap, Figs. 410½ and 415½	.50	.50		
Union Nut Ell	.20	.20			Differential Plunger and Rod, Figs. 410½ and 415½	.50	.55		
Malleable Ell	.25	.25			Suction Pipe Flange	.75	.75		

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THE DEMING COMPANY, SALEM, OHIO, U. S. A.



WINDMILL PUMP STANDARDS, FIGS. 414 AND 424

STROKE, INCHES	6	10	STROKE, INCHES	6	10
Stock or Standard only	\$6.50	\$6.50	Spout Nut	\$0.20	\$0.20
Bearer	2.50	2.75	Malleable Hose Tube	.05	.05
Bearer Link	.35	.50	Flat Rod	.50	.60
Stuffing-box Cap	1.00	1.00	Round Rod	.50	.60
Stuffing-box Gland	.50	.50	Flat and Round Rod Coupling	.25	.25
Lever	1.00	1.25	Malleable Pump Pin	.10	.10
Plain Spout, Fig. 414	.75	.75	Link Pins (Steel), each	.15	.15
Cock Spout, Fig. 424	2.50	2.50	Brace	.25	.25

PIPE FORCE PUMPS, FIGS. 258, 259, 260 AND 261

FIGURE NUMBER	258	259	260	261
Bearer	\$1.75	\$1.75	\$1.50	\$1.50
Lever	1.25	1.25	1.00	1.00
Link	.40	.40	.25	.25
Rack	.45	.45	.60	.60
Gear Guard	.60	.60	.15	.15
Spout	.15	.15	.05	.05
Spout Nut	.05	.05	.20	.20
Hose Tube	.75	.75	.45	.45
Shut-off Screw	.75	.75	.20	.20
Shut-off Clamp	.45	.45	.75	.75
Iron Shut-off Rod	.75	.75	.45	.45
Brass Shut-off Rod with Coupling	.75	.75	.75	.75
Base Piece, "AA-201"	1.40	1.40	1.40	1.40
Base Piece, "BB-201"	1.60	1.60	1.60	1.60
Three-way Casting	2.25	2.25	.85	.85
Three-way Discharge Plug	.85	.85	.25	.25
Malleable Ell	.25	.25	.20	.20
Malleable Ell Nut	.20	.20	.60	.60
Three-way Valve Disc	.60	.60	.20	.20
Three-way Valve Rubbers, each	.20	.20	.50	.50
Three-way Valve Gland	.50	.50	1.25	1.25
Bottom Casting	1.25	1.25	1.10	1.10
Differential Cylinder Tube	1.10	1.10	.60	.60
Differential Cylinder Plug	.60	.60	.65	.65
Differential Plunger Complete	.65	.65	.60	.60
Flat Plunger Rod	.60	.60	.50	.50
Round Plunger Rod	.50	.50	.25	.25
Flat and Round Rod Coupling	.25	.25	.25	.25
Union Coupling Spout	.25	.25	.10	.10
Malleable Pump Pin	.10	.10	.15	.15
Steel Pins, Each	.15	.15		

"GIANT" DOUBLE-ACTING FORCE PUMP, FIG. 554

NAME OF PART	PRICE	NAME OF PART	PRICE
Cylinder, Iron	\$ 7.50	Valves, each	\$0.15
Brass-lined Cylinder	11.00	Lever Socket	.60
Stuffing-box Head	1.00	Wood Lever	.50
Rear Head	.75	Socket Link	.35
Stuffing-box Gland	.50	Plunger with Crimps	1.75
Valve Caps, each	.25	Plunger Center, Iron	.20
Goose Neck	.75	Plunger Follower Irons, each	.20
Suction Nut	.40	Piston Rod Complete	.75
Suction Tube	.35	Cross Head for Piston Rod	.15
Goose Neck Nut	.40	Drip Screws, each	.10
Hose Nut	.15	Hose Nozzle, Iron	.50
Hose Tube	.20		

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HAND AND POWER PUMPS FOR ALL USES



"MARINE" BILGE PUMPS, FIGS. 470 AND 471

FIGURE NUMBER	470		471	
	2	4	2	4
SIZE NUMBER				
Brass-lined Cylinder	\$24.00	\$32.00	\$24.00	\$32.00
Base	8.75	10.50	14.00	22.00
Plunger Complete	8.00	13.00	8.00	13.00
Plunger Casting	6.50	10.50	6.50	10.50
Plunger Pin	.40	.40	.40	.40
Plunger Valve	.75	1.50	.75	1.50
Suction Valve	.80	1.25	.80	1.25
Rubber Facing for Valves, each	.25	.40	.25	.40
Flange	1.50	1.75	1.50	1.75
Lever	3.25	3.75	3.25	3.75
Lever Socket	1.75	2.00	1.75	2.00
Lever Pin with Cotter	.40	.50	.40	.50
Stop Pin for Valves	.10	.10	.10	.10

DIAPHRAGM PUMPS, FIGS. 472 AND 473

FIGURE NUMBER	472		473	
	1	2	1	2
SIZE NUMBER				
Base	\$7.50	\$10.50	\$8.00	\$11.50
Spout Section	6.50	9.50	6.50	9.50
Forged Levers	1.75	4.00	1.75	4.00
Lever Socket	.65	1.00	.65	1.00
Plunger Cage	.50	1.25	.50	1.25
Plunger Top Ring	.40	.50	.40	.50
Plunger Bottom Ring	.50	1.00	.50	1.00
Rubber Diaphragm	3.00	4.50	3.00	4.50
Plunger Valve	.40	.60	.40	.60
Suction Valve	.25	.35	.25	.35
Valve Stop Pin	.05	.10	.05	.10
Rubber Facing for Plunger Valve	.25	.45	.25	.45
Rubber Facing for Suction Valve	.20	.35	.20	.35
Steel Pins with Cotter	.20	.25	.20	.25

DOUBLE-ACTING OSCILLATING FORCE PUMPS, FIGS. 570 AND 670

SIZE NUMBER	0	1	2	3	4	5	6	7	8
Shell Iron	\$6.00	\$6.50	\$7.00	\$8.00	\$ 9.00	\$10.50	\$12.00	\$19.00	\$30.00
Lid Iron	2.50	2.50	2.50	3.00	3.25	3.75	4.50	6.00	9.00
Pipe Flanges, Iron, each	.15	.15	.15	.20	.20	.20	.20	1.00	1.00
Suction Valve Seat ("A" Piece Complete with Valves)	3.00	4.00	4.50	5.00	5.50	7.50	9.50	12.00	15.00
Valves, each	.40	.60	.65	.70	.75	.80	.90	1.25	1.25
Wing Plunger (Steel Shaft), Complete with Valves	5.75	6.75	7.50	8.50	10.00	13.00	16.00	20.00	24.00
Stuffing-box Nut	.75	1.00	1.00	1.00	1.25	1.25	1.25	2.00	2.00
Stuffing-box Gland	.35	.55	.55	.55	.75	.75	.75	.85	.85
Malleable Lever	.35	.50	.50	.50	.60	.60	.60	.75	.75
Base for Fig. 670	2.75	2.75	2.75	2.75	3.25	3.25	3.25	6.00	10.00
Air Chamber	3.50	3.50	3.50	4.50	4.50	4.75	4.75	6.50	7.00
Cock Spout	2.25	2.25	2.25	2.50	2.50	2.50	2.75	2.75	2.75

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THE DEMING COMPANY, SALEM, OHIO, U. S. A.



"TRIUMPH" DOUBLE-ACTING FORCE PUMPS, FIGS. 601 AND 602

SIZE NUMBER	1	2	3	4	5
Brass-lined Cylinders with Brass Valve Seats	\$11.50	\$12.50	\$14.50	\$20.00	\$28.00
Base with Valve Seats	6.25	6.50	6.75	7.75	15.00
Air Chamber	5.00	5.00	5.00	6.00	8.00
Stuffing-box Head	1.00	1.25	1.50	1.75	2.50
Rear Head	.65	.65	.65	.75	1.75
Bolted Stuffing-box Gland	1.50	1.50	1.50	1.50	1.50
Brass Valve Seats, each	.40	.50	.60	.75	1.00
Brass Valves, each	.40	.50	.65	.90	1.00
Piston with Leathers	.65	.75	1.10	1.50	2.50
Piston Rod	3.75	3.75	3.75	3.75	5.00
Lever Socket	1.25	1.25	1.25	1.75	1.75
Lever Link	.35	.35	.35	.50	.90
Malleable Lever with Wood Handle, each	1.50	1.50	1.50	2.50	2.50
Malleable Cross Bar				.60	.60
Drip Screws	.10	.10	.10	.10	.10
Priming Screws	.15	.15	.15	.20	.25
Steel Pins	.15	.15	.15	.15	.15

"TRIUMPH" DOUBLE-ACTING POWER FORCE PUMP, FIG. 609

SIZE NUMBER	1	2	3	4
Bed Plate with Caps	\$35.00	\$35.00	\$35.00	\$35.00
Crank Shaft	6.00	6.00	6.00	6.00
Pinion Shaft	1.75	1.75	1.75	1.75
Gear Wheel	7.50	7.50	7.50	7.50
Pinion	4.00	4.00	4.00	4.00
Connection Rod with Caps	2.75	2.75	2.75	2.75
Yoke	5.00	5.00	5.00	5.00
Pulleys, each	7.50	7.50	7.50	7.50
Cylinder with Valve Seats	13.00	14.00	17.00	22.00
Base with Valve Seats	4.00	4.50	5.00	6.00
Air Chamber	5.00	5.00	5.00	6.00
Piston Rod	2.25	2.25	2.25	3.50
Piston with Leathers	.65	.75	1.10	1.50
Front Cylinder Head	2.50	2.50	2.50	3.00
Rear Head	.65	.75	1.10	1.50
Stuffing-box Cap	1.00	1.00	1.00	1.25
Stuffing-box Gland	.50	.50	.50	.65
Brass Valves	.40	.50	.65	.90
Brass Valve Seats	.40	.50	.60	.75

CLIMAX DOUBLE-ACTING FORCE PUMP, FIG. 608

SIZE NUMBER	1	2	SIZE NUMBER	1	2
Cylinder with Valve Seats, Iron	\$4.00	\$4.50	Plunger Rod Complete	\$1.50	\$1.50
Cylinder with Valve Seats, Brass-lined	6.00	7.50	Cross Head for Plunger Rod	.25	.25
Stuffing-box Head	.50	.75	Malleable Lever	1.25	1.25
Rear Head	.25	.50	Wood Handle	.25	.25
Base	1.25	1.25	Lever Socket	.50	.50
Suction Chamber with Valve Seats	1.50	1.50	Link	.25	.25
Air Chamber	1.50	1.75	Stuffing-box Gland	.40	.40
Plunger with Crimps	.50	.60	Brass Valve Seats, each	.35	.35
			Brass Valves, each	.40	.40
			Thumb Screw, each	.10	.10

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HAND AND POWER PUMPS FOR ALL USES



"ATLAS" DOUBLE-ACTING POWER PISTON PUMP, FIG. 691

SIZE, (DIAMETER AND STROKE), INCHES	2 1/4 x 5	3 x 6	4 x 8
Brass-lined Cylinder with Valve Seats	\$20.00	\$50.00	\$75.00
Brass Liner only for Cylinders,		4.50	8.00
Brass Ring for Cylinder Liner, each		1.25	1.35
Suction Valve Seats . . . . .	.40	.50	.75
Discharge Valve Seats . . . . .	.60	.75	1.65
Suction Valve Cap and Wing . . . . .	.15	.20	.20
Discharge Valve Cap and Wing . . . . .	.20	.20	.30
Suction Valve Rubber, each . . . . .	.10	.10	.20
Discharge Valve Rubber, each . . . . .	.15	.20	.35
Valve Chamber Covers . . . . .	.25	.40	1.75
Rear Cylinder Head and Bearing		5.75	7.25
Stuffing-box Head . . . . .	.70	2.50	3.00
Brass Stuffing-box Nut . . . . .		.85	1.00
Brass Stuffing-box Gland . . . . .	.35	.60	1.00
Piston or Plunger Complete . . . . .	.50	2.50	5.00
Piston Followers, each . . . . .	.05	.90	1.75
Piston Center . . . . .	.05		
Piston Head		1.30	2.75
Piston Rod	2.75	4.00	6.50
Main Gear	2.85	5.25	10.00
Pinion	1.00	3.50	4.25
Crank Shaft . . . . .	.75	1.35	2.00
Pinion Shaft . . . . .	.60	1.40	1.50
Connecting Rods and Caps, each	1.25	2.25	4.75
Cross Head	1.50	4.75	8.00
Crank Disc	1.00	2.50	2.75
Crank Pins, each . . . . .	.25	1.20	1.60
Guide Rods, each . . . . .	.35	1.10	1.30
Gear Guard . . . . .	.75	3.75	4.25
Main Bearing Box Covers . . . . .		.20	.20
Pinion Bearing Box Covers . . . . .		.25	.25
Shaft Collars, each . . . . .	.15	.20	.25
HAND ATTACHMENT FOR "ATLAS" FIG. 691			
Cross Head	1.75		
Long Link . . . . .	.50		
Short Link . . . . .	.25		
Lever Socket . . . . .	.50		
Malleable Lever	1.25		
Wood Handle . . . . .	.25		
Cross Head Pin . . . . .	.25		
AIR PUMPING ATTACHMENT FOR "ATLAS" FIG. 691			
Air Chamber Attachment	2.25	4.25	5.50
Cylinder Tube	1.50	1.75	4.00
Guide Rods, each . . . . .	.40	1.50	2.00
Piston Rod . . . . .	.10	.10	.10
Valve Cap . . . . .	.85	.85	.85
Piston Follower . . . . .	.25	.25	.25
Cross Head Nut . . . . .	.50	.50	.50
Suction Valve . . . . .	.25	.25	.25
Discharge Valve . . . . .	.30	.30	.30
Piston . . . . .	.90	.90	.90
Crimp Spring . . . . .	.05	.05	.05
Air Cock . . . . .	.75	.75	.75
BELT IDLER FOR "ATLAS" FIG. 691			
Idler Complete	6.00	7.50	9.00
Idler Pulley	3.75	3.75	4.00
Idler Arm85	.95	1.25
Idler Cross Head85	2.00	3.00
Shaft Collar, each15	.15	.15

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HAND ROTARY FORCE PUMPS, FIGS. 575, 576, 578 AND 579

SIZE NUMBER	1	2	3	4	5	6
Case only	\$5.00	\$7.00	\$8.50	\$10.50	\$13.00	\$18.50
Lid or Cover	1.75	2.00	2.25	2.50	3.00	4.00
Cams with Short Shaft	4.00	4.50	4.75	5.25	6.50	9.50
Cams with Long Shaft	4.25	4.75	5.00	5.50	6.75	9.75
Stuffing-box Nut . . . . .	.25	.25	.25	.35	.35	.35
Cap Nuts for Bearings, each . . . . .	.10	.10	.10	.15	.15	.15
Spout with Cap Nut	1.00	1.00	1.25	2.00	2.75	4.25
Base for Fig. 575	4.00	4.00	4.25	11.00	11.00	13.00
Base for Fig. 578	4.00	4.00	5.50	. . . . .	. . . . .	. . . . .
Fly-wheel, Fig. 575, with Handle	4.50	4.50	4.50	5.00	5.00	5.00
Fly-wheel with Handle, Fig. 578	3.00	3.00	3.00	. . . . .	. . . . .	. . . . .
Drip Plug . . . . .	.20	.20	.20	.20	.20	.20
Priming Plug . . . . .	.15	.15	.15	.15	.15	.15
Barrel Attachment for Fig. 576 . . . . .	.50	.50	.75	. . . . .	. . . . .	. . . . .
Goose Neck or Hook for Fig. 576 . . . . .	.25	.25	.35	. . . . .	. . . . .	. . . . .
Suction Nut for Figs. 576 and 579 . . . . .	.35	.35	.40	. . . . .	. . . . .	. . . . .
Crank Complete for Figs. 576 and 579 . . . . .	.60	.60	.60	. . . . .	. . . . .	. . . . .
Bracket for Fig. 579	1.75	1.75	2.00	. . . . .	. . . . .	. . . . .

POWER ROTARY PUMPS, FIGS. 577 AND 577₂

SIZE NUMBER	1	2	3	4	5	6
Case, Cover, Cams and Shaft Complete	\$17.50	\$20.50	\$23.00	\$27.50	\$33.00	\$46.00
Case only	5.00	7.00	8.50	10.50	13.00	18.50
Lid or Cover	1.75	2.00	2.25	2.50	3.00	4.00
Cam with Short Shaft	4.00	4.50	4.75	5.25	6.50	9.50
Cam with Long Shaft	4.50	5.00	5.25	5.75	7.00	10.00
Stuffing-box Nuts . . . . .	.25	.25	.25	.35	.35	.35
Cap Nuts for Bearings, each . . . . .	.10	.10	.10	.15	.15	.15
Spout with Cap Nut	1.00	1.00	1.25	2.00	2.75	4.25
Small Base with Drip Screw	1.25	1.25	1.50	. . . . .	. . . . .	. . . . .
Valve Seat with Drip Screw . . . . .	. . . . .	. . . . .	. . . . .	2.25	2.25	5.00
Metallic Valve . . . . .	.35	.35	.40	.65	.65	1.15
Bed Plate	2.00	2.00	2.00	5.00	5.00	7.50
Outboard Bearing	1.00	1.00	1.00	1.00	1.00	2.00
Pulleys, each	2.00	2.00	2.00	4.00	4.00	6.25
Drip Plug . . . . .	.20	.20	.20	.20	.20	.20
Priming Plug . . . . .	.15	.15	.15	.15	.15	.15

HAND AND POWER PISTON PUMPS, FIGS. 585, 590 AND 591

FIGURE NUMBER	585		590		591	
SIZE NUMBER	4	5	4	5	4	5
Cylinder	\$5.00	\$5.50	\$ 5.00	\$ 5.50	\$ 5.00	\$ 5.50
Base	3.25	3.25	3.25	3.25	3.25	3.25
Crank Case	6.50	6.50	6.50	6.50	11.50	11.50
Stuffing-box Lid	3.00	3.00	3.00	3.00	. . . . .	. . . . .
Outside Lid . . . . .	.50	.50	.50	.50	3.00	3.00
Stuffing-box Nut . . . . .	.50	.50	.50	.50	. . . . .	. . . . .
Stuffing-box Gland	1.00	1.00	1.00	1.00	1.25	1.25
Air Chamber	4.00	4.00	4.00	4.00	4.00	4.00
Crank Shaft	5.00	5.00	5.50	5.50	10.00	10.00
Plunger Complete	4.00	5.00	4.00	5.00	4.00	5.00
Connecting Rod	2.50	2.50	2.50	2.50	3.00	3.00
Discharge Flange . . . . .	.50	.50	.50	.50	.50	.50
Lower Valve Complete . . . . .	.85	.85	.85	.85	.85	.85
Pulley only, 16 x 3 inches, each . . . . .	. . . . .	. . . . .	7.00	7.00	7.00	7.00
Pulley only, 24 x 3 inches, each	11.00	11.00	11.00	11.00
Pulley only, 15 x 4 inches, each	6.00	6.00
Handle75	.75

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HAND AND POWER PUMPS FOR ALL USES



ADJUSTABLE STROKE SINGLE-ACTING POWER PUMP, FIG. 582

SIZE, INCHES	2½ x 2	3 x 3	3½ x 4	4 x 4	5 x 5	6 x 5
Bed Plate with Cap	\$16.00	\$25.50	\$38.75	\$38.75	\$68.00	\$68.00
Cylinder with Valve Seat	12.50	17.25	23.50	23.50	36.50	41.50
Plunger with Plug	3.50	7.00	9.00	9.75	15.00	17.75
Plunger Pin . . . . .	.60	.75	1.00	1.10	1.10	1.25
Crank Shaft	3.00	7.00	7.00	7.00	14.75	14.75
Discharge Valve Cover . . . . .	.60	.60	.60	.60	1.25	1.25
Suction Valve Cover . . . . .	.85	1.00	1.40	1.40	2.00	2.00
Gland . . . . .	.60	1.00	1.10	1.25	3.75	3.75
Tight Pulley	7.50	8.00	9.25	14.00	24.00	32.00
Connecting Rod	1.25	3.75	4.00	4.00	.....	.....
Connecting Rod and Cap . . . . .	.....	.....	.....	.....	9.50	9.50
Connecting Rod Bushing . . . . .	.70	.90	1.00	1.00	2.75	2.75
Wrist Pin	1.70	2.75	2.75	2.75	.....	.....
Wrist Pin Washer . . . . .	.15	.15	.15	.15	.....	.....
Wrist Pin Sleeve	1.00	1.10	2.00	2.00	.....	.....
Crank Pin . . . . .	.....	.....	.....	.....	1.75	1.75
Crank Pin Head . . . . .	.....	.....	.....	.....	3.25	3.25
Crank Pin Bushing or Sleeve . . . . .	.....	.....	.....	.....	4.50	4.50
Pipe Flanges, each . . . . .	.....	.....	.....	.....	1.25	1.25
Surface Packing, per set . . . . .	.15	.15	.15	.15	.60	.60
Rubber Valves, each . . . . .	.25	.45	.65	.65	.95	.95
Valve Seats, each	1.10	1.40	2.00	2.00	2.10	2.10
Valve Stems, each . . . . .	.10	.35	.95	.95	.95	.95
Valve Plates, each . . . . .	.20	.20	.40	.40	.45	.45
Valve Springs, each . . . . .	.10	.10	.20	.20	.20	.20

HYDRAULIC RAM, FIG. 690

SIZE NUMBER	2	3	4	5	6	7	8
Brass Impetus Valve and Case Compl.	\$6.00	\$7.00	\$9.00	\$11.00	\$20.00	.....	.....
Brass Case only	3.00	3.50	5.00	7.00	11.00	.....	.....
Brass Impetus Valve only	1.10	1.50	2.00	2.50	5.00	.....	.....
Brass Nut on end of Valve . . . . .	.30	.30	.35	.35	.75	\$ 1.25	\$ 1.75
Brass Adjusting Nut . . . . .	.50	.60	.65	.65	1.25	3.50	3.75
Brass Lock Nut . . . . .	.25	.25	.35	.35	.75	.75	1.50
Brass Screws, each . . . . .	.25	.25	.25	.25	.....	.....	.....
Base with Valve and Seats Complete except Nos. 7 and 8	3.00	3.50	4.00	8.00	14.00	21.00	50.00
Inside Valve Complete, each . . . . .	.80	.80	1.00	1.50	1.50	4.25	3.25
Air Chamber	4.00	4.50	5.00	7.50	18.00	22.00	40.00
Cap Nut . . . . .	.15	.15	.15	.20	.30	.....	.....
Discharge Nut . . . . .	.15	.15	.15	.20	.30	.....	.....
Brass Discharge Tube for Iron Pipe . . . . .	.50	.50	.55	.60	.75	.....	.....
Drive Nut . . . . .	.15	.20	.30	.40	.50	.....	.....
Brass Drive Tube for Iron Pipe . . . . .	.60	.65	1.00	1.25	2.00	.....	.....
Rubber Bumper Ring . . . . .	.05	.05	.05	.05	.10	.20	.20
Brass Impetus Valve Follower . . . . .	.....	.....	.....	.....	.....	4.50	8.50
Brass Impetus Valve Stem . . . . .	.....	.....	.....	.....	.....	6.00	8.25
Brass Binder Nut . . . . .	.....	.....	.....	.....	.....	.75	1.25
Rubber Impetus Valve . . . . .	.....	.....	.....	.....	.....	1.50	3.50
Iron Washer for Impetus Valve . . . . .	.....	.....	.....	.....	.....	.25	.30
Water Chamber with Valve Seats . . . . .	.....	.....	.....	.....	.....	19.25	34.75
Impetus Valve Case, Iron . . . . .	.....	.....	.....	.....	.....	10.00	15.00
Cap for Impetus Valve Case with Brass Bush	9.00	12.50
Blank Flange	1.50	1.75
Discharge Flange	1.75	2.00
Drive Flange	3.50	7.00

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DEMING HYDRAERAM, FIG. 695

SIZE NUMBER	10	11	12	13	14
Impetus Valve Complete	\$7.00	\$ 7.50	\$10.00	\$12.00	\$18.00
Impetus Valve Cover with Seat	2.00	3.00	4.00	4.50	9.00
Impetus Valve Arm	1.25	1.00	1.00	1.25	1.50
Impetus Valve Weight . . . . .	.50	.15	.15	.20	.30
Impetus Valve and Stem . . . . .	.75	1.00	1.50	2.00	3.00
Impetus Valve Adjusting Nut . . . . .	.50	.50	.75	.85	1.00
Impetus Valve Locking Screw . . . . .	. . . . .	.25	.25	.50	.50
Impetus Valve Fulcrum Pin . . . . .	.15	.15	.15	.20	.30
Impetus Valve Seat and Ring . . . . .	. . . . .	.15	.20	.50	.50
Base . . . . .	. . . . .	. . . . .	. . . . .	28.00	. . . . .
Air Chamber	8.00	11.00	23.00	17.00	75.00
Discharge Cap Nut . . . . .	.10	.15	.15	.20	.30
Discharge Coupling Nut . . . . .	.10	.15	.15	.20	.30
Discharge Tube Brass . . . . .	.50	.50	.60	.65	.75
Drive Coupling Nut . . . . .	.10	.20	.30	.40	. . . . .
Drive Tube, Brass . . . . .	.60	.65	1.00	1.25	. . . . .
Discharge Valve (Leather and Weight) . . . . .	.85	1.00	1.25	1.50	2.75

BUCKET SPRAY PUMPS, FIGS. 669, 659 AND 689

FIGURE NUMBER . . .	669	659	689	FIGURE NUMBER . . .	669	659	689
Air Chamber	\$0.75	\$1.75	\$1.75	Foot Rest Complete	\$0.65	\$0.65	\$1.15
Stuffing Cap . . . . .	.25	.25	.25	Malleable Foot Rest . . . . .	.50	.50	. . . . .
Cylinder Tube	1.50	1.50	1.50	Malleable Foot Rest . . . . .	. . . . .	. . . . .	. . . . .
Plunger Tube	1.00	1.00	1.00	Clamp . . . . .	.10	.10	. . . . .
Plunger Complete with . . . . .	. . . . .	. . . . .	. . . . .	Thumb Screw . . . . .	.05	.05	. . . . .
Ball Valve . . . . .	.50	.50	.50	Cylinder Clamp only . . . . .	. . . . .	. . . . .	.50
Foot Valve and . . . . .	. . . . .	. . . . .	. . . . .	Clamping Hinge . . . . .	. . . . .	. . . . .	.10
Strainer with Ball . . . . .	. . . . .	. . . . .	. . . . .	Clamping Screw . . . . .	. . . . .	. . . . .	.10
Valve . . . . .	.75	.75	.75	Adjusting Screw . . . . .	. . . . .	. . . . .	.10
Brass Ball Valves, each . . . . .	.15	.15	.15	Hinge-screw . . . . .	. . . . .	. . . . .	.10
Plunger Packing . . . . .	.05	.05	.05	Foot Rest with Ad- . . . . .	. . . . .	. . . . .	.25
Stuffing-box Packing . . . . .	.05	.05	.05	justing Rod . . . . .	. . . . .	. . . . .	.25
Handle . . . . .	.25	.35	.35	Bail Hook . . . . .	. . . . .	. . . . .	.05

THE "GARDENER'S CHOICE" SPRAYER, FIG. 651

NAME OF PART	PRICE	NAME OF PART	PRICE
Base or Air Chamber	\$4.00	Agitator Yoke	\$0.30
Bottom Casting Complete, with . . . . .	. . . . .	Agitator Cross Head . . . . .	.25
Valves	2.00	Agitator Clamp Complete . . . . .	.30
Bottom Casting only . . . . .	.50	Agitator Yoke Pin . . . . .	.10
Foot Valve and Strainer with Ball . . . . .	. . . . .	Agitator Paddles, per set (2) . . . . .	.15
Valve . . . . .	.85	Plates for Base Bolts . . . . .	.10
Valve Seat and Ball Valve . . . . .	.65	Half Barrel or Tank with Cover	10.00
Ball Valves, each . . . . .	.30	Wheels, each	3.00
Lever . . . . .	.75	Axle Pipe . . . . .	.50
Cylinder Tube, Brass	1.50	Cast Iron Handle . . . . .	.40
Air Chamber Tube, Iron . . . . .	.65	Foot Casting . . . . .	.15
Discharge Pipe . . . . .	.15	Barrel Support or Frame Casting, . . . . .	. . . . .
Piston Rod . . . . .	.20	each . . . . .	.75
Piston Rod Cross Head . . . . .	.25	Axle Collar, each . . . . .	.25
Piston Complete with Crimps . . . . .	.60	Axle Caps, each . . . . .	.20
Piston Center Casting . . . . .	.10	V-Bolt, Front of Barrel . . . . .	.40
Piston Follower Castings, each10	Bolts, Barrel to Axle Collar, each10
Agitator Complete	1.25		

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HAND AND POWER PUMPS FOR ALL USES



THE "CAPTAIN" AND "MAJOR" BARREL SPRAYERS, FIGS. 632 AND 832

FIGURE NUMBER	632	832	FIGURE NUMBER	632	832
Bearer with Clamp	\$1.75	\$1.50	Discharge Pipe	\$0.25	\$0.25
Lever . . . . .	.75	.75	Brass Cylinder Tube	1.50	1.50
Bottom Casting Complete with Valves	2.00	2.50	Piston Rod . . . . .	.25	.25
Bottom Casting only . . . . .	.50	1.15	Piston Rod Cross Head . . . . .	.25	.25
Foot Valve with Strainer and Valves . . . . .	.85	.....	Plunger Complete with Crimps . . . . .	.60	1.25
Discharge Valve Seat with Valve . . . . .	.65	.....	Plunger Center Casting . . . . .	.10	.25
Strainer . . . . .	.....	.35	Plunger Follower Casting, each . . . . .	.10	.35
Valve Cage . . . . .	.....	.05	Agitator Complete	1.25	1.25
Ball Valves, each . . . . .	.30	.30	Agitator Yoke . . . . .	.30	.30
Valve Seats, each . . . . .	.....	.35	Agitator Cross Head . . . . .	.25	.25
Air Chamber Tubing	1.25	1.25	Agitator Yoke Pin . . . . .	.10	.10
			Agitator Paddles, per set . . . . .	.15	.15
			Agitator Pipe Clamp Complete . . . . .	.30	.30

THE "CENTURY" BARREL SPRAYER, FIG. 645

NAME OF PART	PRICE	NAME OF PART	PRICE
Bearer or Top	\$0.75	Plunger Follower Casting, each	\$0.20
Lever	1.00	Plunger Rod . . . . .	.30
Air Chamber Tube	1.75	Plunger Rod Cross Head . . . . .	.25
Discharge Pipe . . . . .	.25	Agitator Complete	1.50
Bottom Attach. for Air Chamber . . . . .	.50	Pipe Clamp . . . . .	.25
Bottom Casting only . . . . .	.75	Agitator Yoke . . . . .	.25
Strainer . . . . .	.35	Agitator Link . . . . .	.15
Valve Seats, each . . . . .	.35	Agitator Cross Head . . . . .	.15
Ball Valves, each . . . . .	.35	Agitator Paddles, per set . . . . .	.15
Cylinder Tube	2.50	Base for Barrel Complete	1.50
Plunger Complete with Crimps	1.00	Filling Cap . . . . .	.10
Plunger Center Casting . . . . .	.15		

"PLANET" DOUBLE-ACTING SPRAY PUMP, FIG. 763

SIZE NUMBER	1	2	SIZE NUMBER	1	2
Base	\$ 7.50	\$ 9.00	Malleable Lever	\$1.25	\$1.75
Cylinder with Liner and Seats	10.00	13.50	Wood Handle . . . . .	.20	.20
Removable Liner	4.00	4.50	Lever Socket . . . . .	.85	.85
Valve Seats, each . . . . .	.40	.60	Lever Rack . . . . .	.40	.40
Brass Ball Valves, each . . . . .	.35	1.00	Cross Head . . . . .	.75	1.50
Liner Cage . . . . .	.05	.20	Cross Head Pin . . . . .	.50	.65
Liner Screw . . . . .	.15	.15	Piston with Crimps	1.10	1.50
Liner Screw Nut . . . . .	.20	.20	Piston Center, Iron . . . . .	.25	.35
Back Cylinder Head . . . . .	.65	1.50	Piston Follower, Iron, each . . . . .	.30	.40
Stuffing-box Gland, Iron . . . . .	.30	1.00	Piston Rod only	1.50	2.75
Stuffing-box Gland, Brass . . . . .	.60	.75	Guide Rods, each . . . . .	.25	.30
Stuffing-box, Iron . . . . .	.90	.90	Long Cylinder Bolts, each . . . . .	.10	.15
Stuffing-box Nut, Brass . . . . .	.85	.85	Rack Rod . . . . .	.20	.20
Suction Chamber with Seats	1.75	3.00	Surface Packing, per set	1.25	1.75
Air Chamber	6.50	9.00			

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THE DEMING COMPANY, SALEM, OHIO, U. S. A.



DOUBLE-ACTING POWER SPRAY PUMP, FIG. 765

SIZE NUMBER	1	2	3	SIZE NUMBER	1	2	3
Bed Plate with Caps	\$20.00	\$30.00	\$30.00	Brass Ball Valves, each	\$0.35	\$1.00	\$1.00
Crank Shaft	5.00	8.00	8.00	Liner Cage	.05	.20	.25
Main Gear	3.50	4.50	4.50	Back Cylinder Head	.65	1.50	1.50
Pinion	1.60	1.60	1.60	Cylinder Ring			.50
Pinion Shaft	.60	1.00	1.00	Stuffing-box Gland, Iron	.30	1.00	1.00
Gear Guard	1.15	1.15	1.15	Stuffing-box Gland, Brass	.60	.75	.75
Idler Complete	7.00	7.00	7.00	Stuffing-box, Iron	.90	1.00	1.00
Idler Bearing	1.25	1.25	1.25	Stuffing-box Nut, Brass	.85	.85	.85
Idler Arm	1.00	1.00	1.00	Suction Chamber with Seats	1.75	3.00	3.00
Idler Pulley	3.75	3.75	3.75	Liner Screw Nut	.20	.20	.20
Idler Collars, each	.15	.15	.15	Liner Screw	.15	.15	.15
Cross Head	.75	1.50	1.50	Piston with Crimps	1.10	1.50	2.25
Cross Head Pin	.50	.65	.65	Piston Center Iron	.25	.35	.75
Connecting Rod End and Cap	1.50	3.25	3.25	Piston Follower Irons, each	.30	.40	.50
Connecting Rod only	.30	.30	.30	Piston Rod only	1.50	2.75	2.75
Guide Rods, each	.25	.30	.30	Air Chamber	6.50	9.00	9.00
Cyl. with Liner and Seats	10.00	13.50	15.50	Long Cylinder Bolts	.10	.15	.10
Removable Liner	4.00	4.50	5.00	Surface Packing, per set	1.25	1.75	2.00
Valve Seats, each	.40	.60	.60				

DUPLEX PLUNGER POWER SPRAY PUMP, FIG. 761

SIZE NUMBER	1	2	SIZE NUMBER	1	2
Base with Valve Seats	\$14.00	\$20.00	Cross Head Nuts, each		\$0.60
Valve Seats only, each	.50	.60	Cross Head Pins		.10
Brass Ball Valves, each	.35	1.00	Plungers and Connecting Rods Complete, each	\$8.00	
Right or Left Column with Caps	6.50	7.50	Connecting Rod and Caps, each		4.00
Crank Shaft	7.50	10.00	Air Chamber	4.25	6.50
Main Gear	2.75	5.00	Plunger Covers, per set		.15
Pinion	1.25	1.65	Belt Tightener Complete	6.00	8.00
Pinion Shaft	.65	1.00	Belt Tightener Pulley	2.50	3.75
Gear Guard	.85	2.25	Belt Tightener Yoke	1.00	1.25
Valve Covers, each	.15	.20	Belt Tightener Arm	.90	1.15
Valve Cover Bars, each	.20	1.25	Belt Tightener Collar	.10	.10
Cylinders, each	1.50	2.00	Belt Tightener Oil Cup Collar	.25	.25
Stuffing-box Nuts, each	.40	.50	Pump Pulley	6.50	7.50
Stuffing-box Glands	1.10	1.35	Gaskets for Valve Caps, each	.10	.10
Plungers only, each		7.50	Gaskets for Cylinders, each	.15	.20
Plunger Cross Heads, each		1.25			

"SAMSON" DOUBLE-ACTING SPRAYER, FIG. 633.

NAME OF PART	PRICE	NAME OF PART	PRICE
Air Chamber Tube	\$7.50	Crosshead Links, each	1.50
Air Chamber Cap	1.00	Valve Chamber Covers, each	.25
Air Chamber Rods, each	.25	Guide Rod	2.00
Base, with Suction Valve Seat	6.50	Differential Plunger with Crimps	.60
Lower Cyl. Castings with Valve Seat	4.25	Lower Plunger Complete	3.50
Lower Cylinder Liner	2.75	Lower Plunger Cage	2.25
Upper Cylinder Liner	3.25	Lower Plunger Follower	1.00
Guide or Bearing Casting	1.50	Malleable Lever	1.75
Brass Valve Seats, each	.60	Wood Handle	.25
Brass Ball Valves, each	1.00	Suction Hose Tube	.50
Lever Socket	1.50	Suction Hose Nut	.20
Crosshead	.35	Cylinder Bolts, each	.20

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



HAND AND POWER PUMPS FOR ALL USES



FOUR-ROW FIELD SPRAYER, FIG. 653

NAME OF PART	PRICE	NAME OF PART	PRICE
Locking Segment and Base	\$1.50	Three-way Hose Connection	.90
Supporting Arm	4.25	Sheath Pipe	1.25
Supporting Clamp and Bolt	.25	Adjusting Rods, each	.10
"L" Bolts with Nuts, each	.45	Center Nozzle Attachments, each	1.10
Locking Lever Complete with Handle	1.00	End Nozzle Attachment, each	.55
Handle only	.50	Hose Spring, each	.35
Fulcrum Pin	.35		

CYLINDER REPAIRS, FIGS. 300, 308, 312 AND 322

SIZE, INCHES	1½ & 1¾	2	2¼	2½	2¾	3	3½	4	5	6
CYLINDER SHELLS, IRON										
Fig. 300	10 inches	\$0.90	\$1.00	\$1.10	\$1.20	\$ 1.30	\$ 1.60	\$ 2.00		
	12 inches	1.00	1.10	1.20	1.40	1.50	1.90	2.50		
	14 inches	1.15	1.25	1.40	1.60	1.75	2.20	3.00		
	16 inches	1.40	1.50	1.60	1.85	2.00	2.50	3.50		
CYLINDER SHELLS, BRASS LINED										
Fig. 308	10 inches	2.00	2.25	2.50	2.75	3.00	3.50	4.00		
	12 inches	2.35	2.60	2.85	3.10	3.35	4.00	5.00		
	14 inches	2.70	2.95	3.25	3.50	3.80	4.75	6.00		
	16 inches	3.00	3.35	3.75	4.00	4.50	5.50	7.00		
CYLINDER SHELLS, BRASS TUBE										
Figs. 312 and 322	10 inches	4.00	4.40	4.70	5.10	5.50	6.50	7.80		
	12 inches	4.65	5.10	5.50	6.00	6.50	7.65	9.20		
	14 inches	5.30	5.80	6.30	6.90	7.50	8.80	10.60		
	16 inches	5.40	5.95	6.50	7.10	7.80	8.50	10.00	21.50	27.00
	18 inches	6.00	6.65	7.20	7.90	8.70	9.50	11.25	13.40	25.00
	20 inches	6.50	7.25	7.90	8.70	9.60	10.50	12.40	15.00	27.50
TOP ATTACHMENT OR CAPS FOR										
Figs. 300, 308, 312, 322, Iron		.40	.40	.40	.40	.50	.60	.80	2.00	2.50
Figs. 312, 322, Brass		1.25	1.50	1.75	2.00	2.50	3.00	3.75	5.00	6.50
BOTTOM ATTACHMENT OR CAP FOR										
Figs. 300, 308, 312, Iron		.60	.60	.60	.60	.75	.90	1.10	3.50	4.00
Fig. 312, Brass		1.50	1.75	2.00	2.25	2.75	3.50	4.25	6.00	8.00
BOTTOM ATTACHMENT COMPLETE WITH VALVE AND CAGE, Fig. 322, Iron										
Attachment only, Iron		.95	.95	.95	1.00	1.05	1.30	1.65	2.00	5.25
Valve with Leather, Iron		.75	.75	.75	.75	.75	.95	1.15	1.40	4.25
Cage, two pieces, Iron		.10	.10	.10	.10	.15	.25	.30	.40	.65
		.10	.10	.10	.15	.15	.20	.25	.30	.40
BOTTOM ATTACHMENT COMPLETE WITH VALVE AND CAGE, Fig. 322, Brass										
Attachment only, Brass		2.50	2.50	3.00	3.50	3.75	4.50	5.50	6.50	9.25
Valve with Leather, Brass		1.75	1.75	2.25	2.50	2.50	3.00	3.75	4.50	6.50
Cage, two pieces, Brass		.35	.35	.35	.40	.50	.65	.75	1.25	1.75
		.40	.40	.40	.60	.75	.90	1.10	1.25	1.50
PLUNGERS ONLY, NO RODS										
"A" Style, All Iron		.40	.40	.45	.50	.55	.65	.85	2.00	
Brass Cage and Valve		.85	1.00	1.25	1.50	1.75	2.00	2.75		
All Brass		1.00	1.25	1.50	1.75	2.00	2.50	3.50		
"J" Style, All Iron		.75	.75	.90	1.00	1.15	1.50	2.00	4.50	6.50
Brass Cage and Valve		1.25	1.50	1.75	2.00	2.25	3.00	3.75	9.50	14.00
All Brass		2.00	2.00	2.25	2.50	2.75	3.00	4.00	5.00	12.00
Plunger Cage, Iron		.10	.12	.12	.15	.15	.25	.30	.80	1.35
Plunger Cage, Brass		.55	.65	.75	.80	.90	1.40	1.80	4.00	6.00
Plunger Follower, "A" Style, Iron		.08	.10	.13	.15	.18	.25	.30		
Plunger Follower, "A" Style, Brass		.40	.50	.60	.70	.75	1.15	1.40		
Plunger Follower, "J" Style, Iron		.12	.15	.20	.20	.25	.30	.45	1.00	1.50
Plunger Follower, "J" Style, Brass		.60	.65	.75	.85	1.00	1.40	1.85	4.25	6.50
Plunger Ring, "J" Style, Iron		.05	.05	.05	.05	.07	.12	.15	.25	.45
Plunger Ring, "J" Style, Brass		.20	.25	.30	.40	.50	.60	.75	1.00	1.50
Plunger Valves, Iron		.05	.05	.05	.08	.10	.12	.15	.25	.45
Plunger Valves, Brass		.15	.18	.25	.30	.35	.50	.65	1.25	1.75
Suction Valve Weights and Screw, Iron										
		.05	.05	.06	.06	.06	.07	.10	.15	.20
Suction Valve Weights and Screw, Brass										
		.20	.20	.25	.30	.40	.50	.60	1.00	1.25

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



THE DEMING COMPANY, SALEM, OHIO, U. S. A.



BRASS ARTESIAN DEEP WELL CYLINDER, FIG. 324

INSIDE DIA. CYLINDER, INS.	1 ³ / ₈	1 ³ / ₄	2 ¹ / ₄	2 ³ / ₄	3 ¹ / ₄	3 ³ / ₄	4 ¹ / ₄	4 ³ / ₄	5 ¹ / ₄	5 ³ / ₄	6 ¹ / ₄	6 ³ / ₄
Top Attachment	\$2 00	\$2 00	\$ 2 75	\$ 3 50	\$ 5 25	\$ 7 25	\$ 9 00	\$12 00	\$15 75	\$15 75	\$22 00	\$ 22 00
Bottom Attachment	2 75	3 00	3 75	4 50	7 00	9 50	12 00	15 00	18 00	18 00	27 00	27 00
Plunger Complete	8 00	8 50	10 50	18 00	27 00	33 00	40 00	52 00	70 00	75 00	90 00	100 00
Lower Valve Complete	3 50	4 00	6 00	10 00	14 00	18 00	26 00	35 00	45 00	50 00	70 00	80 00
Plunger Cage	2 00	2 25	2 50	4 00	6 00	7 50	10 00	12 00	15 00	18 00	23 00	30 00
Plunger Stock	1 75	2 00	2 50	4 25	6 50	8 00	10 00	13 00	16 00	18 00	23 00	30 00
Plunger Nut . . . . .	.75	.85	1 00	2 00	3 50	4 50	5 00	6 00	7 00	8 00	9 00	10 00
Plunger Rings, each . . . . .	.60	.60	.80	1 00	1 25	1 50	1 75	2 50	3 00	3 50	4 00	4 75
Lower Valve Cage	1 50	2 50	3 00	4 00	5 50	7 00	10 00	12 00	14 00	16 00	22 00	28 00
Lower Valve Seat or Stock	1 50	1 50	2 00	2 75	4 00	4 50	7 00	8 50	10 00	12 00	16 00	20 00
Brass Ball Valves . . . . .	.35	.45	.80	2 00	3 25	4 25	5 25	6 50	7 25	10 00	12 00	13 50
Steel Adapter or Wood Rod Coupling . . . . .	.75	.75	1 00	1 00	1 10	1 25	1 25	1 25	1 25	1 25	.....	.....

BRASS ARTESIAN DEEP WELL CYLINDER, FIG. 311

INSIDE DIAMETER CYLINDER, INCHES	1 ³ / ₄	2 ¹ / ₄	2 ³ / ₄	3 ¹ / ₄	3 ³ / ₄
Top Attachment	\$2.00	\$2.75	\$ 3.50	\$ 5.25	\$ 7.25
Bottom Attachment	3.00	3.75	4.50	7.00	9.50
Plunger Complete	6.00	8.00	11.00	15.00	22.00
Lower Valve Complete	4.00	6.00	8.50	12.50	17.00
Plunger Cage	2.00	2.50	3.50	4.00	5.50
Plunger Stock	1.50	2.00	2.50	3.50	5.00
Plunger Nut . . . . .	.85	1.00	1.50	2.25	3.00
Lower Valve Cage	2.00	2.50	3.50	4.00	5.50
Lower Valve Seat or Stock	1.50	2.00	2.75	4.00	4.50
Brass Ball Valve . . . . .	.45	.80	1.25	2.15	3.75
Steel Adapter or Wood Rod Coupling . . . . .	.75	1.00	1.00	1.10	1.25

DEEP WELL POWER WORKING HEAD, FIG. 66

NAME OF PART	PRICE	NAME OF PART	PRICE
Base with Caps	\$40.00	Stuffing-box Gland	\$1.75
Crank Shaft	6.50	Differential Plunger	5.50
Pinion Shaft	1.00	Walking Beam	1.75
Main Gear	3.75	Guide Rods, each . . . . .	.75
Pinion	1.65	Cross Head Pin . . . . .	.25
Main or Plunger Cross Head	3.25	Rod Link	1.25
Crank Cross Head and Cap	6.75	Rod Link Pin . . . . .	.15
Sliding Cross Head End of Beam	2.25	Gear Guard	2.50
Discharge Head	6.00	Pulleys, each	6.00
Stuffing-box	2.00	AIR PUMPING DEVICE	
HAND ATTACHMENT		Bottom Attachment for Air Cylinder	2.75
Cross Head for Lever	4.25	Cylinder Tube	1.35
Bearer	4.25	Plunger Complete without Rod	1.00
Bearer Rack . . . . .	.40	Plunger Top . . . . .	.35
Lever Socket	1.25	Plunger Follower . . . . .	.50
Guide Rods, each	1.75	Bottom Plug . . . . .	.20
Wood Handle . . . . .	.50	Air Valve . . . . .	.15
		Plunger Rod . . . . .	.15

SPECIAL NOTICE

Repair Parts for Pumps and Accessories not listed in the foregoing section will be quoted on request, which should be accompanied by symbol number; or a diagram, complete description and weight of the part. The figure number and size should be given, if known.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



VALUABLE
TECHNICAL DATA
AND
ENGINEERING
TABLES

EMBRACING INFORMATION
USEFUL TO THE ENGINEER,
ARCHITECT AND MANUFACTUR-
ER; ALSO TO DEALERS IN AND
USERS OF PUMPS IN GENERAL,
SUCH AS FACTS, FORMULAS AND
RULES RELATING TO HYDRAU-
LICS AND PNEUMATICS, INCLUD-
ING CAPACITIES, POWER, AND
SPEED OF PUMPS AND THEIR
OPERATING FACTOR





Useful Technical Information

THE AREAS OF CIRCLES are to each other as the square of their diameters. Doubling the diameter of a pipe or cylinder increases its capacity four times. Friction of liquids in pipes increases as the square of the velocity.

ATMOSPHERIC PRESSURE at sea level is usually estimated at 14.7 pounds per square inch, and this pressure will maintain a column of water 33.9 feet high when the normal pressure in the column is relieved by the creation of a vacuum. This is the theoretical distance that water may be drawn by suction. In practice, however, pumps should not be placed over 20 to 25 feet above the water supply, and nearer if possible.

EVERY FOOT OF HEIGHT in a column of water represents .434 pounds pressure to the square inch. It is common practice to estimate that every foot in height is equal to one-half pound pressure per square inch, as this allows for ordinary friction in pipes.

A GALLON OF WATER WEIGHS 8.33 pounds, and contains 231 cubic inches. A cubic foot of water weighs 62.36 pounds, and contains 1,728 cubic inches, or 7.48 gallons.

A MINER'S INCH OF WATER is approximately equal to 1 1/2 U. S. gallons per minute.

Rules to Determine the Size and Speed of Pulleys or Gears

The Driving pulley is called the Driver, and the Driven pulley the Driven.

If the number of teeth in gears is used instead of diameter in these calculations, number of teeth must be substituted wherever diameter occurs.

TO FIND THE DIAMETER OF THE DRIVER, the diameter of Driven and its revolutions, and also revolutions of Driver being given: Multiply the diameter of Driven by its revolutions, and divide the product by the revolutions of Driver; the quotient will give the diameter of Driver.

TO FIND THE DIAMETER OF THE DRIVEN, the revolutions of Driven, also diameter and revolutions of Driver being given: Multiply the diameter of Driver by its revolutions, and divide the product by the revolutions of Driven; the quotient will give the Diameter of the Driven.

TO FIND THE REVOLUTIONS OF THE DRIVER, the diameter and revolutions of the Driven, also diameter of the Driver being given: Multiply the diameter of Driven by its revolutions, and divide the product by the diameter of Driver; the quotient will give the revolutions of Driver,

TO FIND THE REVOLUTIONS OF THE DRIVEN, the diameter and revolutions of the Driver, also diameter of the Driven being given: Multiply the diameter of Driver by its revolutions, and divide the product by the diameter of Driven; the quotient will give the revolutions of Driven.

Data on Air Compression

FRANK RICHARDS, M. E.

AIR COMPRESSION FROM ONE ATMOSPHERE, AT SEA LEVEL, 60° FAHRENHEIT

Gauge Press. Lbs.	Volume		Mean pressure per stroke		Final temper. Air not cooled	HORSE POWER (THEORETICAL)	
	Air const. temper.	Air not cooled	Air const. temper.	Air not cooled		To compress 1 cu. ft. free air per minute	
						Air const. temper.	Air not cooled
0	1.	1.	.0	.0	60.		
1	.936	.95	.96	.97	71.		
2	.88	.91	1.87	1.91	80.4		
3	.83	.87	2.72	2.80	88.9		
4	.786	.84	3.53	3.67	98.		
5	.746	.81	4.3	4.5	106.	.0187	.0196
10	.595	.69	7.62	8.27	145.	.0332	.0360
15	.495	.606	10.33	11.5	178.	.0450	.0502
20	.423	.543	12.62	14.4	207.	.0550	.0628
25	.370	.494	14.59	17.01	234.	.0636	.0742
30	.328	.463	16.34	19.4	255.	.0713	.0846
35	.295	.42	17.92	21.6	281.	.0782	.0942
40	.268	.393	19.32	23.66	302.	.0843	.1032
45	.246	.37	20.52	25.59	321.	.0895	.1116
50	.227	.35	21.79	27.39	339.	.0950	.1195
55	.210	.331	22.77	29.11	357.	.0993	.1270
60	.196	.314	23.84	30.75	375.	.1040	.1341
65	.184	.301	24.77	31.69	389.	.1080	.1402
70	.173	.288	26.00	33.73	405.	.1124	.1471
75	.163	.276	26.65	35.23	420.	.1162	.1537
80	.155	.267	27.33	36.6	432.	.1192	.1597
85	.147	.256	28.05	37.94	447.	.1224	.1655
90	.140	.248	28.78	39.18	459.	.1255	.1709
95	.134	.24	29.53	40.4	472.	.1288	.1762
100	.128	.232	30.07	41.6	485.	.1312	.1815

NOTE.—Losses by machine friction, heating the air, clearance, etc., reduce the efficiency to about 60 per cent for single stage and 75 per cent. for two-stage compression.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



HAND AND POWER PUMPS FOR ALL USES



Table Showing Capacity of Pumps per Stroke
 Figures are for One Single-Acting Cylinder

Diam. of Cylinder Inches	Area Square Inches	LENGTH OF STROKE IN INCHES AND CAPACITY IN GALLONS												
		2	3	4	6	8	10	12	14	16	20	24	30	36
5/8	.307	.003	.004	.005	.008	.011	.013	.016	.019	.021	.027	.032	.040	.048
3/4	.442	.004	.006	.008	.011	.015	.019	.023	.027	.031	.038	.046	.057	.068
7/8	.601	.005	.008	.01	.016	.021	.026	.031	.036	.042	.052	.062	.078	.094
1	.785	.007	.01	.014	.02	.027	.034	.041	.048	.054	.068	.082	.102	.122
1 1/8	.994	.009	.013	.017	.026	.034	.043	.052	.06	.069	.086	.103	.129	.154
1 1/4	1.227	.011	.016	.021	.032	.043	.053	.064	.074	.085	.106	.127	.159	.192
1 3/8	1.485	.013	.019	.026	.039	.051	.064	.077	.089	.103	.128	.154	.192	.232
1 1/2	1.767	.015	.023	.031	.046	.061	.077	.092	.107	.122	.153	.184	.231	.276
1 3/4	2.405	.021	.031	.042	.063	.083	.104	.125	.146	.167	.208	.25	.312	.374
2	3.142	.027	.041	.054	.082	.109	.136	.163	.19	.218	.272	.326	.408	.49
2 1/4	3.976	.034	.052	.069	.103	.138	.172	.206	.241	.275	.344	.413	.516	.62
2 1/2	4.909	.043	.064	.085	.128	.17	.213	.255	.298	.34	.425	.51	.639	.766
2 3/4	5.94	.051	.077	.103	.154	.206	.257	.309	.36	.411	.514	.617	.771	.926
3	7.069	.061	.092	.122	.184	.245	.306	.367	.428	.49	.612	.734	.918	1.102
3 1/4	8.296	.072	.108	.144	.215	.287	.359	.431	.503	.575	.718	.862	1.077	1.294
3 1/2	9.621	.083	.125	.167	.25	.333	.417	.5	.583	.666	.833	1.	1.251	1.50
3 3/4	11.045	.095	.143	.191	.287	.382	.478	.574	.669	.765	.956	1.147	1.434	1.722
4	12.566	.109	.163	.218	.326	.435	.544	.653	.762	.87	1.088	1.306	1.632	1.958
4 1/4	14.186	.123	.184	.246	.368	.491	.614	.737	.86	.982	1.228	1.473	1.842	2.21
4 1/2	15.904	.138	.207	.275	.413	.551	.689	.826	.964	1.102	1.377	1.652	2.067	2.478
4 3/4	17.721	.153	.23	.307	.46	.614	.767	.92	1.073	1.227	1.534	1.84	2.301	2.76
5	19.635	.17	.255	.34	.51	.68	.85	1.02	1.19	1.36	1.7	2.04	2.55	3.06
5 1/4	21.648	.187	.281	.375	.562	.75	.937	1.124	1.311	1.499	1.874	2.248	2.811	3.372
5 1/2	23.758	.206	.309	.411	.617	.823	1.029	1.234	1.44	1.646	2.057	2.468	3.087	3.702
5 3/4	25.967	.225	.337	.45	.674	.899	1.124	1.348	1.573	1.798	2.248	2.696	3.372	4.044
6	28.274	.245	.367	.49	.734	.979	1.224	1.469	1.714	1.958	2.448	2.938	3.672	4.406
6 1/4	30.68	.266	.398	.531	.797	1.062	1.328	1.593	1.859	2.124	2.656	3.186	3.984	4.78
6 1/2	33.183	.287	.431	.574	.861	1.149	1.436	1.796	2.011	2.298	2.873	3.447	4.308	5.178
6 3/4	35.785	.309	.465	.62	.929	1.239	1.549	1.858	2.168	2.479	3.098	3.716	4.647	5.576
7	38.485	.333	.5	.666	1.	1.333	1.666	1.999	2.332	2.666	3.332	3.998	4.998	5.998
7 1/2	44.179	.383	.574	.765	1.148	1.53	1.913	2.295	2.678	3.06	3.825	4.59	5.739	6.886
7 3/4	47.173	.408	.613	.817	1.225	1.633	2.042	2.45	2.858	3.266	4.084	4.9	6.126	7.348
8	50.266	.435	.653	.87	1.306	1.741	2.176	2.611	3.046	3.482	4.352	5.222	6.528	7.834
8 1/2	56.745	.49	.735	.98	1.47	1.96	2.45	2.94	3.43	3.92	4.9	5.88	7.35	8.82
8 3/4	60.132	.52	.78	1.04	1.56	2.08	2.6	3.12	3.64	4.16	5.2	6.24	7.8	9.36
9	63.617	.551	.826	1.101	1.652	2.203	2.754	3.305	3.856	4.406	5.508	6.61	8.262	9.91
9 1/4	70.882	.612	.918	1.224	1.83	2.448	3.06	3.672	4.284	4.896	6.12	7.344	9.18	11.02
9 3/4	74.662	.646	.97	1.293	1.939	2.586	3.232	3.878	4.525	5.171	6.464	7.757	9.696	11.636
10	78.54	.68	1.02	1.36	2.04	2.72	3.4	4.08	4.76	5.44	6.8	8.16	10.2	12.24
10 1/2	86.590	.750	1.125	1.500	2.250	3.000	3.750	4.500	5.250	6.000	7.500	9.000	11.250	13.50
11	95.033	.823	1.234	1.645	2.464	3.291	4.114	4.937	5.76	6.582	8.228	9.874	12.342	14.81
11 1/2	103.869	.90	1.351	1.80	2.701	3.60	4.505	5.405	6.30	7.2	9.	10.8	13.515	16.2
12	113.098	.979	1.468	1.958	2.938	3.917	4.896	5.875	6.854	7.833	9.792	11.75	14.688	17.626
12 1/2	122.718	1.062	1.593	2.124	3.186	4.244	5.310	6.372	7.434	8.488	10.620	12.744	15.930	19.116
13	132.733	1.149	1.723	2.297	3.445	4.596	5.745	6.894	8.042	9.192	11.49	13.78	17.235	20.68
13 1/2	143.139	1.238	1.857	2.476	3.714	4.852	6.190	7.428	8.666	9.904	12.38	14.856	18.57	22.284
14	153.938	1.332	1.998	2.665	3.997	5.33	6.663	7.994	9.328	10.66	13.32	15.98	19.989	23.98
14 1/2	165.13	1.43	2.142	2.866	4.284	5.718	7.148	8.578	10.0	11.424	14.28	17.136	21.444	25.704
15	176.715	1.529	2.294	3.059	4.589	6.119	7.649	9.178	10.7	12.23	15.29	18.35	22.947	27.52
16	201.062	1.74	2.61	3.48	5.22	6.96	8.703	10.44	12.18	13.92	17.40	20.88	26.109	31.32
18	254.47	2.202	3.303	4.404	6.606	8.808	11.01	13.21	15.41	17.61	22.02	26.42	33.03	39.72
20	314.16	2.720	4.08	5.44	8.16	10.88	13.6	16.32	19.04	21.76	27.2	32.64	40.8	48.96

Doubling the DIAMETER of a pipe or cylinder increases its capacity four times.

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Theoretical Horse Power Required to Raise Water to Different Heights

Feet Elevation	5	10	15	20	25	30	35	40	45	50	60
Gallons per Min.											
5	.006	.012	.019	.025	.031	.037	.044	.05	.06	.06	.07
10	.012	.025	.037	.050	.062	.075	.087	.10	.11	.12	.15
15	.019	.037	.056	.075	.094	.112	.131	.15	.17	.19	.22
20	.025	.050	.075	.100	.125	.150	.175	.20	.22	.25	.30
25	.031	.062	.093	.125	.156	.187	.219	.25	.28	.31	.37
30	.037	.075	.112	.150	.187	.225	.262	.30	.34	.37	.45
35	.043	.087	.131	.175	.219	.262	.306	.35	.39	.44	.52
40	.050	.100	.150	.200	.250	.300	.350	.40	.45	.50	.60
45	.056	.112	.168	.225	.281	.337	.394	.45	.51	.56	.67
50	.062	.125	.187	.250	.312	.375	.437	.50	.56	.62	.75
60	.075	.150	.225	.300	.375	.450	.525	.60	.67	.75	.90
75	.093	.187	.281	.375	.469	.562	.656	.75	.84	.94	1.12
90	.112	.225	.337	.450	.562	.675	.787	.90	1.01	1.12	1.35
100	.125	.250	.375	.500	.625	.750	.875	1.00	1.12	1.25	1.50
125	.156	.312	.469	.625	.781	.937	1.094	1.25	1.41	1.56	1.87
150	.187	.375	.562	.750	.937	1.125	1.312	1.50	1.69	1.87	2.25
175	.219	.437	.656	.875	1.093	1.312	1.531	1.75	1.97	2.19	2.62
200	.250	.500	.750	1.000	1.250	1.500	1.750	2.00	2.25	2.50	3.00
250	.312	.625	.937	1.250	1.562	1.875	2.187	2.50	2.81	3.12	3.75
300	.375	.750	1.125	1.500	1.875	2.250	2.625	3.00	3.37	3.75	4.50
350	.437	.875	1.312	1.750	2.187	2.625	3.062	3.50	3.94	4.37	5.25
400	.500	1.000	1.500	2.000	2.500	3.000	3.500	4.00	4.50	5.00	6.00
500	.625	1.250	1.875	2.500	3.125	3.750	4.375	5.00	5.62	6.25	7.50

Feet Elevation	75	90	100	125	150	175	200	250	300	359	400
Gallons per Min.											
5	.09	.11	.12	.16	.19	.22	.25	.31	.37	.44	.50
10	.19	.22	.25	.31	.37	.44	.50	.62	.75	.87	1.00
15	.28	.34	.37	.47	.56	.66	.75	.94	1.12	1.31	1.50
20	.37	.45	.50	.62	.75	.87	1.00	1.25	1.50	1.75	2.00
25	.47	.56	.62	.78	.94	1.09	1.25	1.56	1.87	2.19	2.50
30	.56	.67	.75	.94	1.12	1.31	1.50	1.87	2.25	2.62	3.00
35	.66	.79	.87	1.08	1.31	1.53	1.75	2.19	2.62	3.06	3.50
40	.75	.90	1.00	1.25	1.50	1.75	2.00	2.50	3.00	3.50	4.00
45	.84	1.01	1.12	1.41	1.69	1.97	2.25	2.81	3.37	3.94	4.50
50	.94	1.12	1.25	1.56	1.87	2.19	2.50	3.12	3.75	4.37	5.00
60	1.12	1.35	1.50	1.87	2.25	2.62	3.00	3.75	4.50	5.25	6.00
75	1.40	1.69	1.87	2.34	2.81	3.28	3.75	4.69	5.62	6.56	7.50
90	1.68	2.02	2.25	2.81	3.37	3.94	4.50	5.62	6.75	7.87	9.00
100	1.87	2.25	2.50	3.12	3.75	4.37	5.00	6.25	7.50	8.75	10.00
125	2.34	2.81	3.12	3.91	4.69	5.47	6.25	7.81	9.37	10.94	12.50
150	2.81	3.37	3.75	4.69	5.62	6.56	7.50	9.37	11.25	13.12	15.00
175	3.28	3.94	4.37	5.47	6.56	7.66	8.75	10.94	13.12	15.31	17.50
200	3.75	4.50	5.00	6.25	7.50	8.75	10.00	12.50	15.00	17.50	20.00
250	4.69	5.62	6.25	7.81	9.37	10.94	12.50	15.72	18.75	21.87	25.00
300	5.62	6.75	7.50	9.37	11.25	13.12	15.00	18.75	22.50	26.25	30.00
350	6.56	7.87	8.75	10.94	13.12	15.31	17.50	21.87	26.25	30.62	35.00
400	7.50	9.00	10.00	12.50	15.00	17.50	20.00	25.00	30.00	35.00	40.00
500	9.37	11.25	12.50	15.62	18.75	21.87	25.00	31.25	37.50	43.75	50.00

The theoretical horse power required to elevate water is found by multiplying the gallons pumped per minute by the total lift (including friction) in feet, and dividing by 4000. To get the actual horse power required, divide the theoretical power obtained from the table above by the efficiency of the pump expressed as a decimal.

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HAND AND POWER PUMPS FOR ALL USES



Comparative Equivalents of Liquid Measures and Weights

Measures and Weights for Comparison	MEASURE AND WEIGHT EQUIVALENTS OF ITEMS IN FIRST COLUMN								
	U. S. Gallon	Imperial Gallon	Cubic Inch	Cubic Foot	Cubic Metre	Litre	*Vedro	*Pood	Pound
U. S. Gallon	1.	.833	231.	.1337	.00378	3.785	.308	.231	8.33
Imperial Gallon	1.20	1.	277.27	.1604	.00454	4.542	.369	.277	10.
Cubic Inch	.0043	.00358	1.	.00057	.00016	.0163	.00132	.001	.0358
Cubic Foot	7.48	6.235	1728.	1.	.02827	28.312	2.304	1.728	62.355
Cubic Metre	264.17	220.05	61023.	35.319	1.	1000.	81.364	61.023	2200.54
Litre	.26417	.2200	61.023	.0353	.001	1.	.08136	.06102	2.2005
* Vedro	3.249	2.706	750.1	.4344	.01228	12.29	1.	.7501	27.06
† Pood	4.328	3.607	1000.	.578	.01636	16.381	1.333	1.	36.07
Pound	.12	.1	27.72	.016	.00045	.454	.0369	.0277	1.

*Vedro and Pood are a Russian measure and weight respectively.

CONVENIENT TO KNOW { A common water pail holds 19 pounds, or 2.272 U. S. gallons.
 { A miner's inch of water equals approximately 11½ U. S. gallons per minute
 { One metre equals 39.37 inches, or 3.281 feet.

Relative Quantities of Water

Delivered in 24 Hours, in 1 Hour, and in 1 Minute.

Gallons in 24 hours	Gallons in 1 hour	Gallons in 1 min.	Gallons in 24 hours	Gallons in 1 hour	Gallons in 1 min.	Gallons in 24 hours	Gallons in 1 hour	Gallons in 1 min.
2500000	104166.0	1736.0	650000	27083.3	451.3	150000	6250.0	104.1
2000000	83333.3	1388.0	600000	25000.0	416.7	100000	4166.6	69.4
1500000	62500.0	1041.7	550000	22916.6	381.9	75000	3125.0	52.9
1000000	41666.6	694.3	500000	20833.3	347.2	60000	2500.0	41.6
950000	39583.3	659.7	450000	18750.0	312.5	50000	2083.3	34.7
900000	37500.0	625.0	400000	16666.6	277.7	25000	1041.6	17.3
850000	35416.6	590.2	350000	14583.3	243.0	20000	833.3	13.8
800000	33333.3	555.5	300000	12500.0	208.3	15000	625.0	10.4
750000	31250.0	520.8	250000	10416.7	173.6	10000	416.6	6.9
700000	29166.6	486.1	200000	8333.3	138.8	5000	208.3	3.4

Strokes for Piston Speed of 100 Feet per Minute

Length of Stroke Inches	Number of Strokes	Length of Stroke Inches	Number of Strokes	Length of Stroke Inches	Number of Strokes
4	300	12	100	24	50
5	240	14	86	26	46
6	200	16	75	28	43
7	172	18	67	30	40
8	150	20	60	36	33
10	120	22	55	40	30

Deep Well Pump Plunger Loads—in Pounds

Lift in Feet	DIAMETER OF CYLINDERS AND LOAD IN POUNDS											
	2¾	3¼	3¾	4¼	4¾	5¾	6¾	7½	8½	9	9½	10
50	129	180	240	307	384	562	775	956	1228	1377	1535	1700
75	195	270	360	460	576	845	1162	1435	1840	2065	2300	2550
100	260	360	480	615	770	1125	1550	1910	2455	2755	3070	3400
125	320	450	600	770	960	1405	1940	2390	3070	3440	3835	4250
150	385	540	720	920	1150	1685	2325	2870	3685	4130	4600	5100
200	515	720	960	1230	1535	2250	3100	3825	4910	5510	6135	6800
250	645	900	1200	1535	1920	2810	3875	4780	6140	6885	7670	8500
300	775	1080	1440	1840	2305	3370	4650	5740	7370	8260	9200	10200
350	900	1260	1680	2150	2690	3935	5425	6690	8600	9640	10740	11900
400	1030	1440	1920	2455	3075	4500	6200	7650	9825	11015	12270	13600
500	1290	1800	2400	3070	3840	5620	7750	9560	12280	13770	15340	17000

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Table Showing Head in Feet and Pressure in Pounds

HEAD OF WATER AND EQUIVALENT PRESSURE						PRESSURE OF WATER AND EQUIVALENT HEAD					
Feet Head	Lbs. Press.	Feet Head	Lbs. Press.	Feet Head	Lbs. Press.	Lbs. Press.	Feet Head	Lbs. Press.	Feet Head	Lbs. Press.	Feet Head
5	2.17	70	30.3	200	86.6	5	11.5	70	161.6	180	415.6
10	4.33	80	34.6	250	108.2	10	23.0	80	184.7	190	438.9
15	6.50	90	39.0	300	129.9	15	34.6	90	207.8	200	461.7
20	8.66	100	43.3	350	151.5	20	46.2	100	230.9	225	519.5
25	10.83	110	47.6	400	173.2	25	57.7	110	253.9	250	577.2
30	12.99	120	52.0	500	216.5	30	69.3	120	277.0	275	643.0
35	15.16	130	56.3	600	259.8	35	80.8	130	300.1	300	692.7
40	17.32	140	60.6	700	303.1	40	92.3	140	323.2	325	750.4
45	19.49	150	65.0	800	346.4	45	103.9	150	346.3	350	808.1
50	21.65	160	69.2	900	389.7	50	115.4	160	369.4	400	922.6
60	26.09	180	78.0	1000	433.0	60	138.5	170	392.5	500	1154.5

Table of Effective Fire Streams

Using 100 feet of 2½ inch ordinary best quality Rubber-Lined Hose between Nozzle and Hydrant or Pump.
J. R. FREEMAN, C. E.

Smooth Nozzle, Size	¾ Inch						⅞ Inch						1 Inch					
Pressure at Hydrant, lbs.	32	43	54	65	75	86	34	46	57	69	80	91	37	50	62	75	87	100
Pressure at Nozzle, lbs.	30	40	50	60	70	80	30	40	50	60	70	80	30	40	50	60	70	80
Press. lost in 100ft. 2½ in. hose	2	3	4	5	5	6	4	6	7	9	10	11	7	10	12	15	17	20
Vertical Height, feet	48	60	67	72	76	79	49	62	71	77	81	85	51	64	73	79	85	89
Horizontal Distance, feet	37	44	50	54	58	62	42	49	55	61	66	70	47	55	61	67	72	76
Gallons Discharged per min.	90	104	116	127	137	147	123	142	159	174	188	201	161	186	208	228	246	263

Smooth Nozzle, Size	1½ Inch						1¾ Inch						1⅞ Inch					
Pressure at Hydrant, lbs.	42	56	70	84	98	112	49	65	81	97	113	129	58	77	96	116	135	154
Pressure at Nozzle, lbs.	30	40	50	60	70	80	30	40	50	60	70	80	30	40	50	60	70	80
Press. lost in 100 ft. 2½ in. hose	12	16	20	24	28	32	9	25	31	37	43	49	28	37	46	56	65	74
Vertical Height, ft.	52	65	75	83	88	92	53	67	77	85	91	95	69	79	87	92	97	97
Horizontal Distance, feet	50	59	66	72	77	81	54	63	70	76	81	85	56	66	73	79	84	88
Gallons Discharged per min.	206	238	266	291	314	336	256	296	331	363	392	419	315	363	406	445	480	514

250 gallons per minute gives a good standard fire stream with 80 pounds pressure at the hydrant.

Table for Open Weir Measurement

Giving Cubic Feet of Water per minute that flows over an open Weir one inch wide and from ⅛ to 20⅞ inches deep.
PELTON W. W. CO.

INCHES		⅛	¼	⅜	½	¾	¾	⅞
0	.00	.01	.05	.09	.14	.19	.26	.32
1	.40	.47	.55	.61	.73	.82	.92	1.02
2	1.13	1.23	1.35	1.46	1.58	1.70	1.82	1.95
3	2.07	2.21	2.34	2.48	2.61	2.76	2.90	3.05
4	3.20	3.35	3.50	3.66	3.81	3.97	4.14	4.30
5	4.47	4.64	4.81	4.98	5.15	5.33	5.51	5.69
6	5.87	6.06	6.25	6.44	6.62	6.82	7.01	7.21
7	7.40	7.60	7.80	8.01	8.21	8.42	8.63	8.83
8	9.05	9.26	9.47	9.69	9.91	10.13	10.35	10.57
9	10.80	11.02	11.25	11.48	11.71	11.94	12.17	12.41
10	12.64	12.88	13.12	13.36	13.60	13.85	14.09	14.34
11	14.59	14.84	15.09	15.34	15.59	15.85	16.11	16.36
12	16.62	16.88	17.15	17.41	17.67	17.94	18.21	18.47
13	18.74	19.01	19.29	19.56	19.84	20.11	20.39	20.67
14	20.95	21.23	21.51	21.80	22.08	22.37	22.65	22.94
15	23.23	23.52	23.82	24.11	24.40	24.70	25.00	25.30
16	25.60	25.90	26.20	26.50	26.80	27.11	27.42	27.72
17	28.03	28.34	28.65	28.97	29.28	29.59	29.91	30.22
18	30.54	30.86	31.18	31.50	31.82	32.15	32.47	32.80
19	33.12	33.45	33.78	34.11	34.44	34.77	35.10	35.44
20	35.77	36.11	36.45	36.78	37.12	37.46	37.80	38.15

In making Weir measurements, place a board or plank in the stream at the point so that a pond will form above it. A rectangular notch is cut in it large enough so that all the water will flow over the notch. The length of the notch should be from two to four times its depth. The edges should be beveled to slope outward in the direction of the flow of the water. In the pond about six feet above the Weir a stake should be driven so that its top is precisely level with the bottom of the notch, and at some convenient point for measuring. The depth of the water flowing over the Weir may then be ascertained by an ordinary rule, placed on top of the stake, measuring to the surface of the water and the quantity figured from the table above.

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HAND AND POWER PUMPS FOR ALL USES



Friction of Water in Pipes

Loss of head in feet due to Friction, per 100 feet of smooth, straight cast iron pipe

Gallons Per Minute	1/2-Inch Pipe		3/4-Inch Pipe		1-Inch Pipe		1 1/4-Inch Pipe		1 1/2-Inch Pipe		2-Inch Pipe		2 1/2-Inch Pipe		3-Inch Pipe		4-Inch Pipe		
	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	
2	2.10	5.30	1.20	1.40															
3	3.16	11.30	1.80	2.90	1.12	0.90													
4	4.21	19.20	2.41	5.00	1.49	1.52	0.86	0.40	0.63	0.187									
5	5.26	29.00	3.01	7.50	1.86	2.32	1.07	0.60	0.79	0.283	.51	.09	0.33	0.05					
10	10.52	105.00	6.02	27.10	3.72	5.40	2.14	2.18	1.57	1.02	1.02	.36	0.65	0.12	0.45	0.05			
15			9.02	57.00	6.13	18.90	3.92	4.65	2.72	2.25	1.53	0.81	0.98	0.25	0.68	0.11			
20			12.03	97.00	7.44	30.10	4.29	7.90	3.15	3.70	2.04	1.29	1.31	0.43	0.91	0.18			
25					9.30	45.50	5.36	11.90	4.56	5.60	2.55	1.96	1.63	0.66	1.13	0.27			
30					11.15	64.00	6.43	16.90	4.72	7.80	3.06	2.73	1.96	0.92	1.36	0.38			
35					13.02	85.00	7.51	22.30	5.51	10.30	3.57	3.66	2.29	1.23	1.59	0.51			
40					14.88	109.00	8.58	28.50	6.30	13.30	4.08	4.68	2.62	1.57	1.82	0.65	1.02	0.16	
45							9.68	35.20	7.08	16.60	4.60	5.80	2.95	1.97	2.02	0.80	1.17	0.20	
50							10.72	43.20	7.87	20.20	5.11	7.10	3.30	2.38	2.27	0.98	1.28	0.24	
70							15.01	81.00	11.02	37.60	7.15	13.20	4.60	4.42	3.18	1.83	1.79	0.45	
75									11.80	42.70	7.66	14.90	4.93	5.07	3.41	2.11	1.92	0.52	
100									15.74	73.00	10.21	25.60	6.54	8.60	4.54	3.52	2.55	0.88	
120											12.25	36.00	7.84	12.00	5.45	4.97	3.06	1.22	
125											12.75	38.90	8.16	13.01	5.68	5.40	3.19	1.33	
150											15.30	54.00	9.80	18.72	6.80	7.72	3.84	1.82	
175													11.43	23.70	7.92	9.75	4.45	2.40	
200													13.07	30.90	9.08	12.80	5.11	3.12	
225															10.12	16.00	6.32	4.72	
250															11.28	19.70	6.40	4.80	
270															12.45	22.70	6.90	5.50	
275															12.70	23.60	7.03	5.71	
300															13.62	27.10	7.66	6.70	
350																	8.90	8.80	
400																	10.20	11.30	
450																	11.50	14.10	
470																	12.16	16.00	
475																	12.30	16.40	
500																	12.77	17.20	

Gallons Per Minute	5-Inch Pipe		6-Inch Pipe		8-Inch Pipe		10-Inch Pipe		12-Inch Pipe		16-Inch Pipe		20-Inch Pipe		24-Inch Pipe		30-Inch Pipe		
	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	
70	1.14	0.15																	
100	1.63	0.29	1.14	0.10															
120	1.96	0.41	1.42	0.18															
125	2.04	0.46	1.48	0.20															
150	2.45	0.63	1.71	0.23															
175	2.86	0.84	2.00	0.34															
200	3.27	1.06	2.28	0.44															
225	3.67	1.33	2.57	0.53															
250	4.08	1.60	2.80	0.66	1.60	0.16													
270	4.42	1.86	3.03	0.81	1.70	0.18													
275	4.50	1.94	3.06	0.82	1.73	0.19													
300	4.90	2.25	3.40	0.92	1.90	0.26													
350	5.72	2.99	3.98	1.21	2.20	0.29													
400	6.54	3.81	4.54	1.58	2.60	0.40													
450	7.35	4.75	5.12	1.96	2.92	0.46	1.80	0.150											
470	7.78	5.30	5.49	2.23	3.07	0.55	1.92	0.170											
500	8.17	5.80	5.60	2.33	3.20	0.58	2.04	0.200	1.42	0.08									
550	8.99	6.90	6.16	2.81	3.52	0.70	2.25	0.236	1.57	0.098									
600	9.80	8.10	6.72	3.36	3.84	0.83	2.46	0.282	1.71	0.106									
650	10.62	9.40	7.28	3.93	4.16	0.96	2.66	0.327	1.85	0.134									
700	11.44	10.80	7.84	4.56	4.46	1.10	2.86	0.368	2.00	0.154									
750	12.26	12.30	8.50	5.00	4.80	1.24	3.06	0.422	2.13	0.170									
800			9.08	5.64	5.12	1.41	3.28	0.476	2.27	0.196									
850			9.58	6.25	5.48	1.63	3.48	0.534	2.41	0.22									
900			10.30	7.22	5.75	1.76	3.68	0.592	2.56	0.24									
950			10.72	7.65	6.06	2.05	3.88	0.653	2.70	0.25									
1000			11.32	8.60	6.40	2.16	4.08	0.718	2.84	0.295									
1100			12.50	10.22	7.03	2.51	4.50	0.860	3.13	0.35									
1200			13.52	11.92	7.67	3.04	4.91	1.040	3.41	0.41									
1500					9.60	4.48	6.10	1.490	4.20	0.61	2.39	0.171							
2000					12.70	7.65	8.10	2.500	5.60	1.02	3.19	0.280							
2500							10.10	3.810	7.00	1.56	3.99	0.397							
3000							12.10	5.300	8.40	2.42	4.79	0.568	3.08	0.191					
3500							14.10	7.200	9.80	2.80	5.59	0.745	3.59	0.251					
4000									11.35	3.80	6.38	0.956	4.10	0.323					
5000									14.20	5.82	7.96	0.144	5.13	0.488	3.55	0.199	2.27	0.067	

When pipe is slightly rough, add 15 per cent. When very rough, add 30 per cent.
 Vel.—Velocity feet per second. Fric.—Friction head in feet.

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Friction of Water in Elbows

Loss of head in feet, due to friction in various sizes of smooth 90° elbows when discharging the given quantities of water

Gals. per Minute	1-Inch		1¼-Inch		1½-Inch		2-Inch		2½-Inch		3-Inch		4-Inch		5-Inch		6-Inch		8-Inch		10-Inch		12-Inch	
	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.	Vel.	Fric.
5	2.04	0.06	1.30	0.14																				
10	4.08	0.22	2.60	0.21																				
15	6.12	0.49	3.90	0.29	2.73	0.09																		
20	8.16	0.87	5.20	0.52	3.64	0.16																		
25	10.20	1.35	6.50	0.80	4.55	0.25	2.60	0.09																
30	12.24	1.95	7.80	1.15	5.46	0.36	3.06	0.13																
35	14.28	2.65	9.10	1.60	6.37	0.50	3.57	0.18	2.29	0.09														
40	16.32	3.46	10.40	2.05	7.28	0.64	4.05	0.23	2.62	0.11														
45			11.70	2.70	8.19	0.81	4.60	0.29	2.95	0.14	2.02	0.06												
50					9.10	0.99	5.11	0.35	3.30	0.18	2.27	0.08												
70					12.74	1.98	7.15	0.70	4.60	0.34	3.18	0.19	1.79	0.05										
100							10.20	1.41	6.54	0.74	4.54	0.29	2.55	0.10										
120							12.25	2.24	7.84	1.17	5.45	0.46	3.06	0.15	1.96	0.06								
150							15.30	3.20	9.80	1.58	6.80	0.66	3.84	0.22	2.45	0.09								
175									11.43	2.16	7.92	0.90	4.45	0.30	2.86	0.12	2.00	0.06						
200									13.07	2.96	9.08	1.18	5.11	0.40	3.27	0.16	2.28	0.07						
250											11.28	1.84	6.40	0.62	4.08	0.25	2.80	0.12	1.60	0.04				
300											12.45	2.35	6.90	0.70	4.42	0.25	3.03	0.14	1.70	0.05				
370											13.62	2.63	7.66	0.89	4.90	0.36	3.40	0.18	1.90	0.06				
350													8.90	1.24	5.72	0.50	3.98	0.24	2.20	0.09				
400													10.20	1.59	6.54	0.63	4.54	0.29	2.60	0.10				
450													11.50	2.01	7.35	0.81	5.12	0.39	2.92	0.13	1.80	0.05		
470													12.16	2.26	7.78	0.90	5.49	0.46	3.07	0.14	1.92	0.06		
500													12.77	2.47	8.17	1.01	5.69	0.48	3.20	0.16	2.00	0.07	1.40	0.04
750															12.26	2.24	8.40	1.09	4.50	0.36	3.00	0.15	2.10	0.07
1050																	12.57	2.41	7.04	0.76	4.40	0.29	3.08	0.14
1250																	14.10	3.02	8.00	1.00	5.00	0.40	3.50	0.20
1500																		9.60	1.44	6.10	0.58	4.20	0.29	

When pipe is slightly rough, add 15 per cent. When very rough, add 30 per cent.
 Vel.—Velocity in feet per second. Fric.—Friction head in feet.
 Table shows loss for one elbow, and is based on Weisbach's Formula for short radius bends.

Water Required per Minute to Feed Boilers

(Using the "Centennial Standard"—30 pounds or 3.6 gallons of water per horse power per hour, evaporated from 100° F. to 70 pounds steam pressure per square inch.)

H. P. Boiler	Feed Water Gallons	H. P. Boiler	Feed Water Gallons	H. P. Boiler	Feed Water Gallons	H. P. Boiler	Feed Water Gallons	H. P. Boiler	Feed Water Gallons
20	1.2	60	3.6	110	6.6	190	11.4	400	24.0
25	1.5	65	3.9	120	7.2	200	12.0	450	27.0
30	1.8	70	4.2	130	7.8	225	13.5	500	30.0
35	2.1	75	4.5	140	8.4	250	15.0	600	36.0
40	2.4	80	4.8	150	9.0	275	16.5	700	42.0
45	2.7	85	5.1	160	9.6	300	18.0	800	48.0
50	3.0	90	5.4	170	10.2	325	19.5	900	54.0
55	3.3	100	6.0	180	10.8	350	21.0	1000	60.0

Sizes of Single-Acting Triplex Pumps Recommended to Feed Boilers

While 30 pounds of water per horsepower per hour is the usual basis of estimate, this table is based on 36.6 pounds per hour, giving a reasonable amount of excess supply.

Horse Power of Boiler	FEED WATER AT 212°		Size of Pump	Revolutions per Minute	Horse Power of Boiler	FEED WATER AT 212°		Size of Pump	Revolutions per Minute
	Pounds per Hour	Gallons per Minute				Pounds per Hour	Gallons per Minute		
50	1830	3 6	2½ x 2	29	600	21960	43.8	4½ x 6	35
75	2745	5.4	2½ x 3	29	700	25620	51.3	5 x 6	34
100	3660	7.3	3 x 3	28	800	29280	58.5	5½ x 8	24
150	5490	10.9	3½ x 3	30	1000	36600	73.2	5½ x 8	30
200	7320	14.6	3½ x 4	28	1200	43920	87.8	6 x 8	30
250	9150	18.3	3½ x 4	37	1500	54900	109.	7 x 8	28
300	10980	21.9	4 x 4	34	1800	65880	131.	8 x 8	25
350	12810	25.6	4 x 6	27	2000	73200	146.	8 x 8	29
400	14640	29.3	4 x 6	30	2500	91500	183.	8 x 10	28
500	18300	36.6	4½ x 6	30	3000	109800	219.	9 x 10	26

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



HAND AND POWER PUMPS FOR ALL USES



Irrigation Quantity Tables

Amount of water required to cover one acre to given depths.

*Second Feet reduced to Gallons and Acre Feet.

Gallons required to cover a given number of acres to a depth of one foot (Acre foot)

Depth in inches and feet (Acres inches and acre feet)	Cubic feet (or second feet) contained in one acre to depths given in first column	Gallons	Second feet	Gallons per minute	Gallons per pumping day of 12 hours.	Acres feet per pumping day of 12 hours	Acres (or number of acre feet)	Gallons
ft. in.								
1	3630	27154	1/4	112.2	80790	.2479	1	325851
2	7260	54309	1/2	224.4	161579	.4959	2	651703
3	10890	81463	3/4	336.6	242369	.7438	3	977554
4	14520	108617	1	448.8	323158	.9917	4	1303406
5	18150	135771	1 1/4	561.0	403948	1.2397	5	1629257
6	21780	162926	1 1/2	673.2	484738	1.4876	6	1955109
7	25410	190080	1 3/4	785.5	565527	1.7355	7	2280960
8	29040	217234	2	897.7	646317	1.9835	8	2606812
9	32670	244389	2 1/2	1122.1	807896	2.4793	9	2932663
10	36300	271542	3	1346.5	969475	2.9752	10	3258515
11	39930	298697	4	1795.3	1292634	3.9669	15	4887772
1 00	43560	325851	5	2244.2	1615792	4.9586	20	6512029
1 2	50820	380160	6	2693.0	1938951	5.9503	25	8146286
1 4	58080	434469	7	3141.8	2262109	6.9421	30	9775544
1 6	65340	488777	8	3590.6	2585268	7.9338	40	13034058
1 8	72600	543086	9	4039.5	2908426	8.9255	60	19551087
1 10	79860	597394	10	4488.3	3231585	9.9173	80	26068116
2 00	87120	651703	20	8976.6	6463170	19.8345	160	52136232

*One cubic foot of water per second (exact 7.48052 gallons) constant flow is known as the "Second Foot." The "Acre Foot" is the quantity of water required to cover one acre to a depth of one foot.

Contents of Round Tanks in U. S. Gallons for Each Foot in Depth

Inside Diameter Ft. In.	Gallons One foot in depth	Inside Diameter Ft. In.	Gallons One foot in depth	Inside Diameter Ft. In.	Gallons one foot in depth	Inside Diameter Ft. In.	Gallons One foot in depth.
1 0	5.87	5 9	194.19	10 6	653.69	15 3	1365.96
1 3	9.17	6 0	211.44	10 9	678.88	15 6	1407.51
1 6	13.21	6 3	229.43	11 0	710.69	15 9	1457.00
1 9	17.98	6 6	248.15	11 3	743.36	16 0	1503.62
2 0	23.49	6 9	267.61	11 6	776.77	16 3	1550.97
2 3	29.73	7 0	287.80	11 9	810.91	16 6	1599.06
2 6	36.70	7 3	308.72	12 0	845.18	16 9	1647.89
2 9	44.41	7 6	330.38	12 3	881.39	17 0	1697.45
3 0	52.86	7 9	352.76	12 6	917.73	17 3	1747.74
3 3	62.03	8 0	375.90	12 9	954.81	17 6	1798.76
3 6	73.15	8 3	399.76	13 0	992.62	17 9	1850.53
3 9	82.59	8 6	424.36	13 3	1031.17	18 0	1903.02
4 0	93.97	8 9	449.21	13 6	1070.45	18 3	1956.25
4 3	103.03	9 0	475.80	13 9	1108.06	18 6	2010.21
4 6	118.93	9 3	502.65	14 0	1151.21	18 9	2064.91
4 9	132.52	9 6	530.18	14 3	1192.69	19 0	2121.58
5 0	146.83	9 9	558.45	14 6	1234.91	19 3	2176.68
5 3	161.88	10 0	587.47	14 9	1277.86	19 6	2233.52
5 6	177.67	10 3	617.17	15 0	1321.54	20 0	2349.46

Atmospheric Pressures, Equivalent Heads and Suction Lift

ALTITUDE	Barometric Pressure Per Sq. In. Pounds	Equivalent Head of Water Feet	Practical Suction Lift of Pumps Feet
Sea Level.	14.70	33.95	22
1/4 mile (1320 feet) above sea level.	14.02	32.38	21
1/2 mile (2640 feet) above sea level.	13.33	30.79	20
3/4 mile (3960 feet) above sea level.	12.66	29.24	18
1 mile (5280 feet) above sea level.	12.02	27.76	17
1 1/4 miles (6600 feet) above sea level.	11.42	26.38	16
1 1/2 miles (7920 feet) above sea level.	10.88	25.13	15
2 miles (10560 feet) above sea level.	9.88	22.82	14

NOTE.—Barometer in inches multiplied by 0.4908 equals pressure per square inch.

Alphabetical Index, Figure Index and Telegraph Cipher Code, Pages 343 to 352



Theoretical Discharge of Nozzles in U. S. Gallons Per Minute

HEAD		Velocity of Discharge Feet per Sec.	DIAMETER OF NOZZLE IN INCHES								
Pounds	Feet		1/8	1/8	3/8	1/2	3/8	1/2	5/8	3/4	7/8
10	23.1	38.6	0.37	1.48	3.32	5.91	13.3	23.6	36.9	53.1	72.4
15	34.6	47.25	0.45	1.81	4.06	7.24	16.3	28.9	45.2	65.0	88.5
20	46.2	54.55	0.52	2.09	4.69	8.35	18.8	33.4	52.2	75.1	102
25	57.7	61.0	0.58	2.34	5.25	9.34	21.0	37.3	58.3	84.0	114.
30	69.3	66.85	0.64	2.56	5.75	10.2	23.0	40.9	63.9	92.0	125.
35	80.8	72.2	0.69	2.77	6.21	11.1	24.8	44.2	69.0	99.5	135.
40	92.4	77.2	0.74	2.96	6.64	11.8	26.6	47.3	73.8	106.	145.
45	103.9	81.8	0.78	3.13	7.03	12.5	28.2	50.1	78.2	113.	153.
50	115.5	86.25	0.83	3.30	7.41	13.2	29.7	52.8	82.5	119.	162.
55	127.0	90.4	0.87	3.46	7.77	13.8	31.1	55.3	86.4	125.	169.
60	138.6	94.5	0.90	3.62	8.12	14.5	32.5	57.8	90.4	130.	177.
65	150.1	98.3	0.94	3.77	8.45	15.1	33.8	60.2	94.0	136.	184.
70	161.7	102.1	0.98	3.91	8.78	15.7	35.2	62.5	97.7	141.	191.
75	173.2	105.7	1.01	4.05	9.08	16.2	36.4	64.7	101.	146.	198.
80	184.8	109.1	1.05	4.18	9.39	16.7	37.6	66.8	104.	150.	205.
85	196.3	112.5	1.08	4.31	9.67	17.3	38.8	68.9	108.	155.	211.
90	207.9	115.8	1.11	4.43	9.95	17.7	39.9	70.8	111.	160.	217.
95	219.4	119.0	1.14	4.56	10.2	18.2	41.0	72.8	114.	164.	223.
100	230.9	122.0	1.17	4.67	10.5	18.7	42.1	74.7	117.	168.	229.
105	242.4	125.0	1.20	4.79	10.8	19.2	43.1	76.5	120.	172.	234.
110	254.0	128.0	1.23	4.90	11.0	19.6	44.1	78.4	122.	176.	240.
115	265.5	130.9	1.25	5.01	11.2	20.0	45.1	80.1	125.	180.	245.
120	277.1	133.7	1.28	5.12	11.5	20.5	46.0	81.8	128.	184.	251.
125	288.6	136.4	1.31	5.22	11.7	20.9	47.0	83.5	130.	188.	256.
130	300.2	139.1	1.33	5.33	12.0	21.3	48.0	85.2	133.	192.	261.
135	311.7	141.8	1.36	5.43	12.2	21.7	48.9	86.7	136.	195.	266.
140	323.3	144.3	1.38	5.53	12.4	22.1	49.8	88.4	138.	199.	271.
145	334.8	146.9	1.41	5.62	12.6	22.5	50.6	89.9	140.	202.	275.
150	346.4	149.5	1.43	5.72	12.9	22.9	51.5	91.5	143.	206.	280.
155	404.1	161.4	1.53	6.18	13.9	24.7	55.6	98.8	154.	222.	302.
170	461.9	172.6	1.65	6.61	14.8	26.4	59.5	106.	165.	238.	323.

HEAD		Velocity of Discharge Feet per Sec.	DIAMETER OF NOZZLE IN INCHES								
Pounds	Feet		1	1 1/8	1 1/4	1 3/8	1 1/2	1 3/4	2	2 1/4	2 1/2
10	23.1	38.6	94.5	120	148	179	213	289	378	479	591
15	34.6	47.25	116	147	181	219	260	354	463	585	723
20	46.2	54.55	134	169	209	253	301	409	535	676	835
25	57.7	61.0	149	189	234	283	336	458	598	756	934
30	69.3	66.85	164	207	256	309	368	501	655	828	1023
35	80.8	72.2	177	224	277	334	398	541	708	895	1106
40	92.4	77.2	189	239	296	357	425	578	756	957	1182
45	103.9	81.8	200	253	313	379	451	613	801	1015	1252
50	115.5	86.25	211	267	330	399	475	647	845	1070	1320
55	127.0	90.4	221	280	346	418	498	678	886	1121	1385
60	138.6	94.5	231	293	362	438	521	708	926	1172	1447
65	150.1	98.3	241	305	376	455	542	737	964	1220	1506
70	161.7	102.1	250	317	391	473	563	765	1001	1267	1565
75	173.2	105.7	259	327	404	489	582	792	1037	1310	1619
80	184.8	109.1	267	338	418	505	602	818	1070	1354	1672
85	196.3	112.5	276	349	431	521	620	844	1103	1395	1723
90	207.9	115.8	284	359	443	536	638	868	1136	1436	1773
95	219.4	119.0	292	369	456	551	656	892	1168	1476	1824
100	230.9	122.0	299	378	467	565	672	915	1196	1512	1870
105	242.4	125.0	306	388	479	579	689	937	1226	1550	1916
110	254.0	128.0	314	397	490	593	705	960	1255	1588	1961
115	265.5	130.9	320	406	501	606	720	980	1282	1621	2005
120	277.1	133.7	327	414	512	619	736	1002	1310	1659	2050
125	288.6	136.4	334	423	522	632	751	1022	1338	1690	2090
130	300.2	139.1	341	432	533	645	767	1043	1365	1726	2132
135	311.7	141.8	347	439	543	656	780	1063	1390	1759	2173
140	323.3	144.3	354	448	553	668	795	1082	1415	1790	2212
145	334.8	146.9	360	455	562	680	809	1100	1440	1820	2250
150	346.4	149.5	366	463	572	692	824	1120	1466	1853	2290
175	404.1	161.4	395	500	618	747	890	1210	1582	2000	2473
200	461.9	172.6	423	535	660	799	950	1294	1691	2140	2645

NOTE.—The actual quantities will vary from these figures, the amount of variation depending upon the shape of nozzle and size of pipe at the point where the pressure is determined. With smooth taper nozzles the actual discharge is about 94 per cent. of the figures given in the tables.

Complete Table of Contents and General Classification of Pumps, Pages 7 and 8



I N D E X E S
AND
TELEGRAPH CODE
FOR
CONVENIENCE OF PATRONS

EMBRACING FIGURE INDEX ARRANGED BY FIGURE NUMBERS, CONSECUTIVELY; AND ALPHABETICAL INDEX ARRANGED BY NAME OF ARTICLE. THE TELEGRAPH CIPHER CODE DEFINES SENTENCES RELATING TO ENQUIRIES AND PRICES; ALSO ORDERS AND THEIR EXECUTION.





Index to Figures

Articles in this Catalogue are generally designated by a Figure number. This Index should be used when the Figure number is known; otherwise the Alphabetical Index, following, should be used to find description and list when the name is known.

FIG.	PAGE	FIG.	PAGE	FIG.	PAGE	FIG.	PAGE
40	192-195, 211	277	157	410	82	535	175
41	196, 197	280	55	410 $\frac{1}{2}$	84	540	19
48	206, 207, 210	281	56	412	82	541	30
50	188-191, 209-212, 282	282	57	414	77	542	31
52	200, 201	283	54, 58	415	83	543	138
58	198, 199	286	49	415 $\frac{1}{2}$	84	544	19
61	232, 233	290	50	420	44, 45	548	26
62	234, 235, 278-281	291	51	421	44, 45	552	143
63	279, 280, 281	298	37	423	44, 45	554	134
64	279	300	92	424	77	554 $\frac{1}{2}$	135
66	236, 237, 274-277	306	90	430	25	559	26
70	204, 205	308	88, 93	435	248	561	145
72	202, 203	311	98	439	249	564	144
73	202, 203	312	94	440	74	565	144
78	227	314	96	441	78	566	146
80	228, 229	319	101, 252	442	34, 53	569	243
81	230, 231	320	159	444	62, 74	570	136
82	228, 229	321	159	444 $\frac{1}{2}$	75	575	174
83	230, 231	322	95	445	76	576	172
101	15	323	106	446	86	577	170, 176, 177
102	11	324	99	447	86	577 $\frac{1}{2}$	176, 177
115	15	325	113	449	86	578	171
120	16	326	113	450	55	579	171
124	17	328	113	450 $\frac{1}{2}$	59	580	181
125	12	330	113	451	56	584	69
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Telegraph Cipher Code

For the accommodation of those desirous of making inquiries, or placing orders by telegraph, we append the following code, the use of which will often save considerable expense.

A great part of the articles listed in this catalogue are given cipher words by which they may be ordered by telegraph.

Directions for Cipher Correspondence

In writing Cipher messages, great care should be exercised. Each Cipher word should begin with a capital letter; all t's should be crossed, and all i's dotted, and the greatest precision in penmanship should be maintained throughout. Where a blank space (.....) occurs in a sentence (of the Code), the word to supply the place of the blank space should follow the Cipher word expressing such sentence; and if more than one blank space (...) occurs, the supplying words should follow in their order after the Cipher word. The following is our

CABLE ADDRESS —“DEMING, Salem, Ohio.”

We also use Lieber's, the A. B. C. 4th and 5th Edition, and Western Union Telegraphic Codes. When using either of these special Codes, add to telegram the word “Lieber” for the Lieber Code; the word “Alphabet” for A. B. C. 4th and 5th Editions, and the word “Western” for Western Union Telegraphic Code.

CIPHER GLOSSARY

Concerning Goods in Stock

PABULUM Have you in stock?	PACKET How soon could you furnish?
PADDLING How soon could you ship if ordered at once?	PACIFY Have you in stock and could you ship at once?
PADDLE We have in stock.	PAGAN We have in stock, and will ship at once.
PADLOCK We have in stock, and could ship at once	PAINFUL We have none in stock, but could furnish in a few days.
PAINTER We have no . . . in stock, but will ship other goods promptly.	PAINLESS We have none of the goods you order in stock.

Concerning Classes of Goods

PIANIST Pitcher Spout Pumps.	PLACID Fitted with Hose Attachments.
PICKING Cistern Pumps.	PLAGUE Fitted for Lead Pipe.
PICNIC Set-length Lift Pumps.	PLANING Fitted for Iron Pipe.
PILFERER Set-length Force Pumps.	PLANISH Fitted for Lead and Iron Pipe.
PIGEON Hand and House Force Pumps.	PLASTER Without Brass Soldering Tubes.
PIGMENT Deep Well Pump Standards.	PLATE With Cock on Spout.
PIGMY Windmill Pump Standards.	PLATING With . . . Feet of Hose and Discharge Nozzle.
PILGRIM Anti-freezing Three-way Windmill Pumps.	PLATEN Fitted for 1 -inch Suction Pipe.
PILLAGE Iron Cylinders, or Working Sections.	PLATONIC Fitted for 1¼-inch Suction Pipe.
PILLOW Brass-lined Iron Cylinders.	PLATOON Fitted for 1½-inch Suction Pipe.
PINCHING Brass Tube Cylinders.	PLATTER Fitted for 2 -inch Suction Pipe.
PINNACLE Rotary Force Pumps.	PLAUDIT Fitted for 2½-inch Suction Pipe.
PIQUANT Double-acting Horizontal Force Pumps.	PLAUSIBLE Fitted for 3 -inch Suction Pipe.
PLAGIARIZE Triplex Power Pumps.	PLAUSIVE Fitted for 1 -inch Discharge Pipe.
PLACIDLY Deep Well Working Heads.	PLASTRON Fitted for 1¼-inch Discharge Pipe.
PLAINT Spray Pumps and Accessories.	PLAYFUL Fitted for 1½-inch Discharge Pipe.
PIRACY Hydraulic Rams.	PLAYING Fitted for 2 -inch Discharge Pipe.
PIRATE Repairs for Pumps.	PLEADING Fitted for 2½-inch Discharge Pipe.
PITTANCE Fitted with Inside Attachments.	PLEADER Fitted for 3 -inch Discharge Pipe.
PLACARD Fitted with Metallic Valves.	

Engineering Tables and Information, relating to Hydraulics, Pages 333 to 342



Concerning Quotations and Terms

- PLEDGE At what price can you furnish?
- PLEDGING How soon and at what price can you furnish?
- PLENEOUS Give us your lowest quotation on
- PLOWING We quote on your specifications
- PLOWBOY We quote you for immediate acceptance, as follows:
- PRAYING We accept your order at prices named.
- PREACHED We cannot accept your order at prices named.
- PREACHING We cannot hold this quotation open.
- PREDICT We cannot sell the goods at that price now; our quotation was for immediate acceptance.
- PLENTIFUL Is your offer of still good?
- PLEONASM Will you hold the quotation open?
- PLIABLE How long will you hold the quotation open?
- PREDICTED Terms: Cash with the order.
- PREFACE Terms: Cash on receipt of invoice.
- PREFIX Terms: Sight Draft with bill lading.
- PREFIXED Terms: 30 days, net.
- PREJUDICE Terms: 60 days, net.
- PREMIUM Terms: 60 days, less two per cent. discount for cash in 10 days.
- PRESIDE F. O. B. Cars
- PRETEND Freight allowance cents per 100 pounds

Concerning Orders and Shipments

- PALATINE When can you ship?
- PALENESS When will you ship?
- PALISADE When will you ship our order of?
- PASSION Advise us by telegraph when you can ship our order.
- PASSOVER Have you shipped our order of?
- PASSPORT How soon can you complete our order of?
- PASTORATE Enter our order for specifications for which follow by mail.
- PASSWORD Do not ship our order of until advised by us.
- PASTIME If you can ship at once advise us by telegraph.
- PASTORAL If you cannot ship within time mentioned advise us by telegraph.
- PASTRY Ship what you have in stock, and let balance follow as soon as possible.
- PASTURED Ship when you can fill the order complete.
- PEAKISH Ship by steamer to via
- PEASANT Our order of not yet received. Send tracer after shipment.
- PEBBLE In shipping give preference over all others to order of
- PATHETIC Ship immediately by freight.
- PATHOS Ship immediately by express.
- PATRONAGE Ship by fast freight.
- PAULINE Ship by quickest route.
- PAVILION Ship by rail to obtaining the lowest through rate.
- PLEBEIAN Quote prices, weight and time of delivery.
- PROBATE Referring to your letter of
- PROBATION We wrote you fully to-day.
- PROBING We have no letter from you.
- PROBITY Write giving full particulars.
- PROCLAIM Mail blue-print of
- PROCTOR Referring to your telegram of
- PRODING Referring to our telegram of
- PRODIGAL Telegraph by night message.
- PRODIGY Telegraph immediately.
- PROFANATE Why do you not telegraph?
- PROFANE Blue-print will be mailed.
- PROTECTION What substitution can you make?
- PROFESSOR Instructions follow by mail.
- PROFFER Answer by mail.
- PEDAN Have you shipped us any on our order of?
- PEDAL What is the lowest rate of freight to?
- PEDIMENT Make lowest possible contract for freight to destination.
- PEERDOM We can ship
- PEEVISH We will ship
- PEGASUS We can ship on receipt of order.
- PEGMATE If ordered at once could ship
- PEGGED We will make a shipment
- PEGUAN We will complete your order of in about
- PELTING We cannot ship for a week or two.
- PENALTY We have shipped your order of
- PENANCE Your telegram was received after goods had been shipped.
- PENITENT We have entered your order of and will ship soon as possible.
- PENMAN Please send explicit shipping instructions.
- PENNING Rate of freight to is
- PENSION We cannot obtain through rate of freight to
- PENTAGON To-day or to-morrow.
- PENURY In a few days.
- PEPSIN The middle of this week.
- PERFUME The last of this week.
- PERJURE In about a week.
- PERPLEX The first of next week.
- PERSPIRE The middle of next week.
- PERSIST The last of next week.
- PETURB In about two weeks.
- PETULANT Answer by telegraph at our expense.
- PEWTER Your letter was received in time.
- PHALANX Your letter was not received in time.
- PHANTOM Your telegram was received in time.
- PHARISEE Your telegram was not received in time.



HAND AND POWER PUMPS FOR ALL USES



Concerning Power Pumps, Motors and Engines

- PACATE..... Vertical triplex single-acting pump, gallons capacity per minute operating against pounds pressure per square inch.
- PACATED..... Vertical triplex double-acting pump, gallons per minute operating against pounds pressure per square inch.
- PACATION... Pump fitted with bronze plungers and bronze-lined stuffing boxes and glands.
- PACING..... Pump fitted with brass cased plungers and bronze-lined stuffing boxes and glands.
- PIMENT..... Pump with all-bronze water end.
- PACER..... Pump fitted with bronze pistons and piston rods.
- PALETTE... Rawhide pinion (or pinions) on pump shaft.
- PALFREY... Maximum speed of pump to be R. P. M.
- PALMIC..... Fitted with friction cut-off coupling.
- PALMY..... Fitted with friction pulley.
- PADRA..... Complete with H. P. motor.
- PAGODA... For volt, direct current.
- PALING... For volt, alternating current, phase, cycles.
- PALISH..... Motor (or engine) shaft inches diameter with keyway inches wide by inches deep.
- PALENDAR... Provided with automatic electric controller operated by float in tank.
- PALKEE..... Provided with automatic electric controller operated by pressure regulator.
- PALLIARD... Engine is of H. P. operating at R. P. M.
- PALLIATE... Pulley wheel of engine, inches diameter, inches face, operating R. P. M.
- PALM..... Pulley on shaft of pump inches diameter, inches face.
- PALMED..... Deep well working head to deliver gallons per minute with total lift of feet.
- PALMING... Deep well working head inch stroke, to operate cylinder inches in diameter, total lift of feet.
- PALMATE... With extensions for locating water end feet below power end.
- PALMAR..... Fitted for inch suction pipe.
- PALMETTO... Fitted for inch discharge pipe.

Concerning Miscellaneous Matters

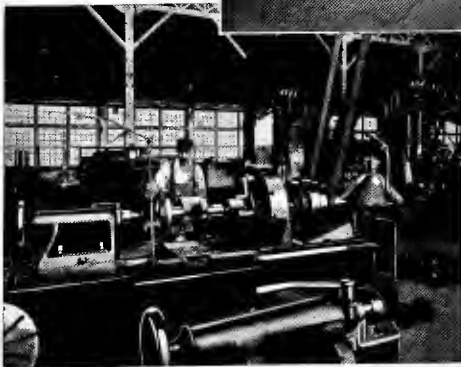
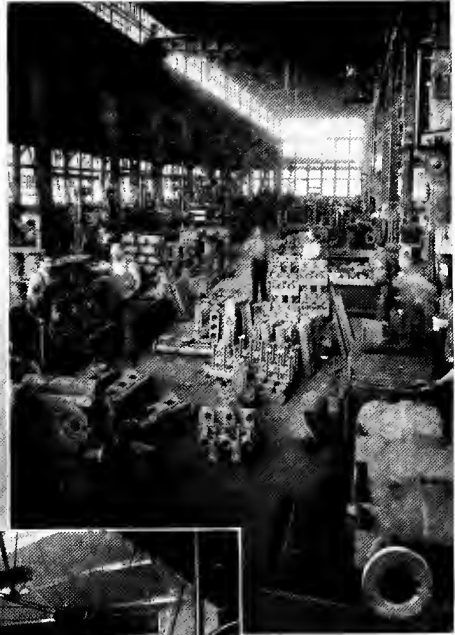
- PINDAR... We have received no letter from you in regard to
- PINEAL... We have no reply to our letter of
- PINAFORE... We have no reply to our telegram of
- PINASTER... Kindly reply to our letter of
- PINERY... Kindly reply to our telegram of
- PINFOLD... Have you received our letter of
- PINHOLE... Have you received our telegram of
- PINNER... Your letter of ... was not received until ...
- PINNOCK... We anticipate a letter from you regarding
- PIPPIN... Have you received our letter of ... regarding
- PIRATIC... We have not received a letter from you regarding
- PISTOLET... We do not understand your telegram by cipher code, repeat it using regular language.
- PITCHING... Write us fully in regard to matter in our letter of
- PITEOUS... Call up over the telephone at o'clock.
- PITFALL... Will you be at your office on
- PITAFAT... I will be able to see you at about the business mentioned.
- PITIABLE... When you receive our letter of please telegraph reply.
- PITIFUL... Is the matter mentioned sufficiently important for us to send a representative? Kindly telegraph reply.
- PIVOT..... Referring to your letter of we wish to say that
- PITYING... We cannot send one of our representatives until Telegraph if that is satisfactory.



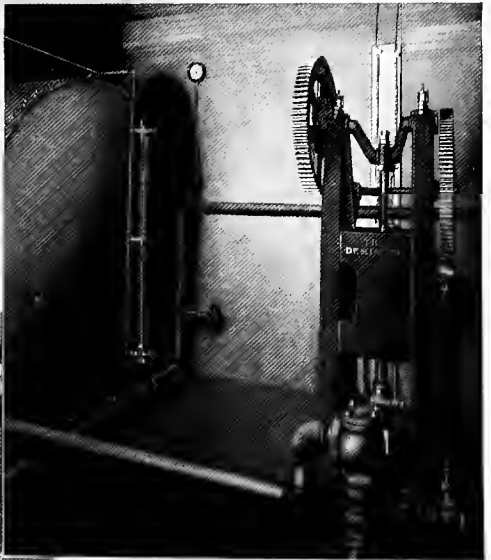
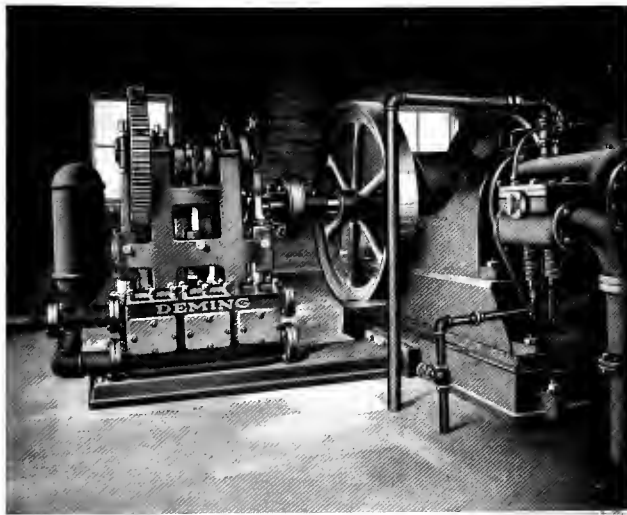
A Group of Interior Views in The Deming Company's Factory, Foundry and Warehouse.



HAND AND POWER PUMPS FOR ALL USES



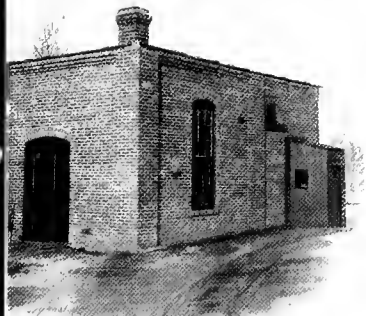
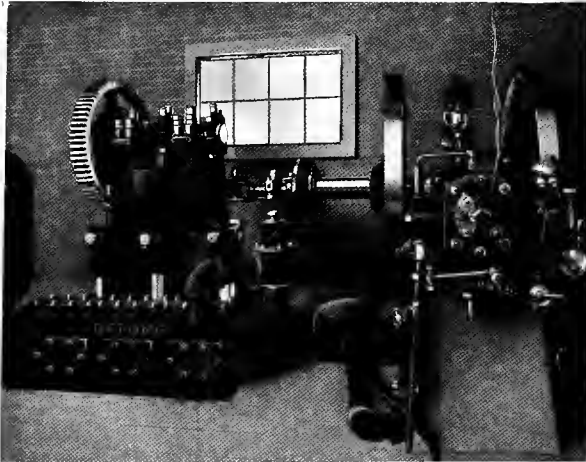
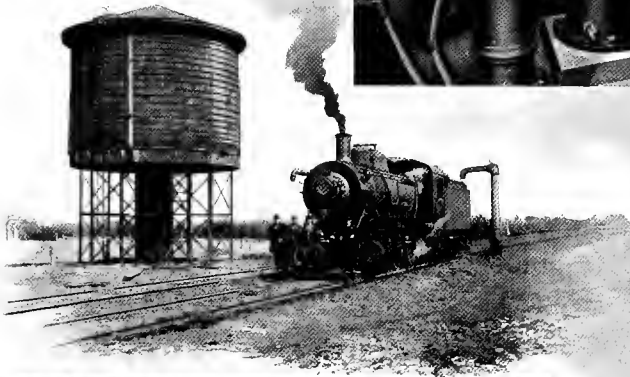
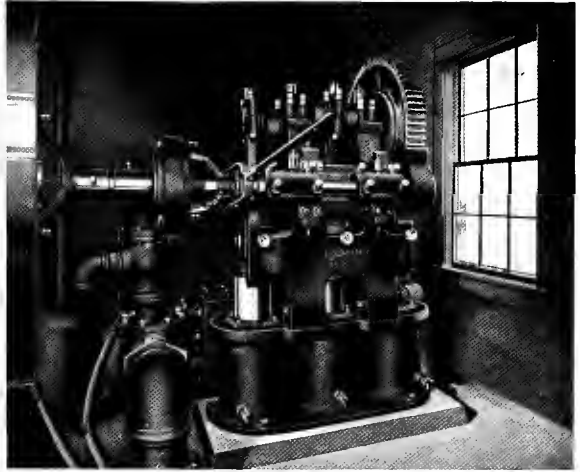
Some Interior Views and Mechanical Operations in
The Deming Company's Plants.



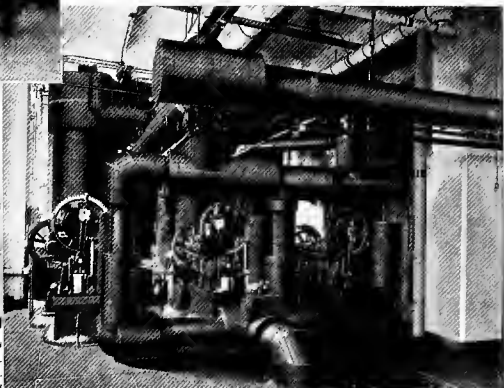
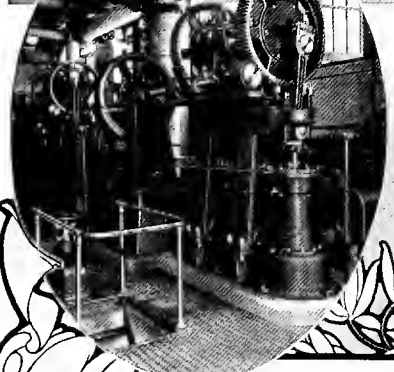
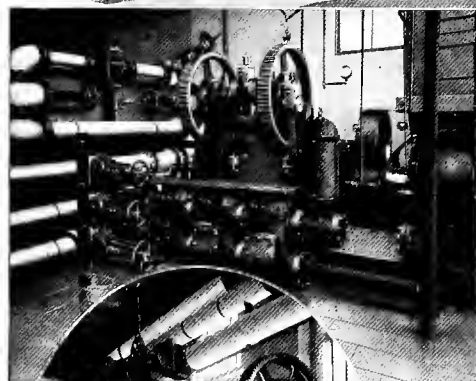
Deming Triplex Power Pump installed for Mr. Alfred G. Vanderbilt, at Newport, R. I., and Deep Well Pump for G. H. F. Godfrey, at Roslyn, L. I.



HAND AND POWER PUMPS FOR ALL USES



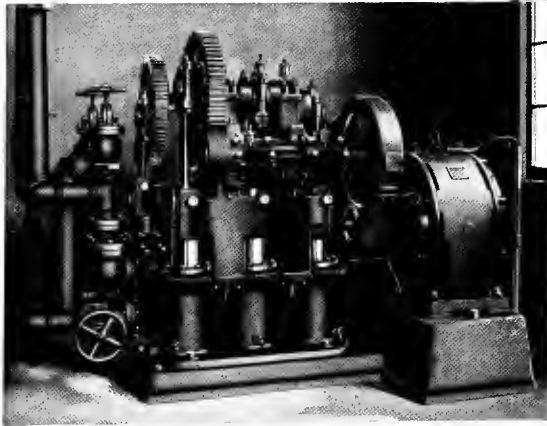
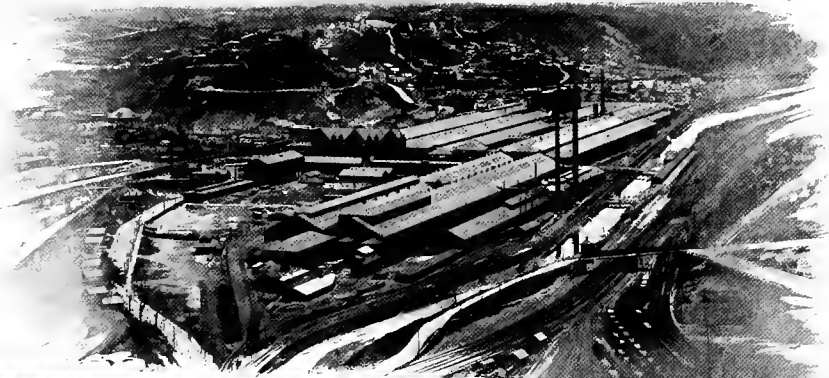
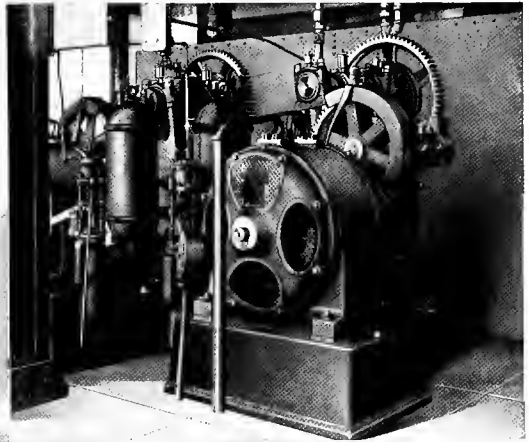
Typical Railway Pumping Stations—Installations of Deming Power Pumps for the C. & A. Ry. and C. & G. W. Ry.



The Eastman Kodak Company, Rochester, New York, showing a few of the many Deming Power Pumps used in various parts of the Kodak Works.



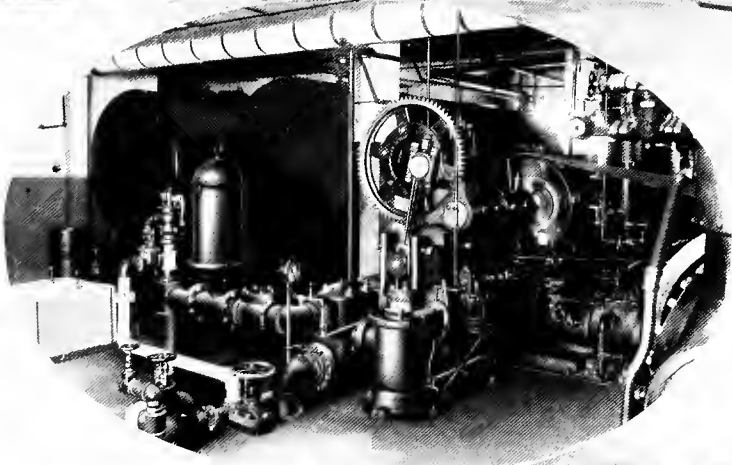
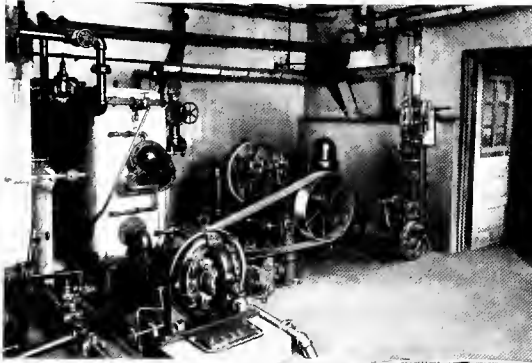
HAND AND POWER PUMPS FOR ALL USES



The Westinghouse Electric & Manufacturing Company, Pittsburgh, Pa., using many Deming Triplex Electric Pumps for Hydraulic Elevators and other service.



THE DEMING COMPANY, SALEM, OHIO, U. S. A.



The Marlborough-Blenheim Hotel, Atlantic City, N. J.
Equipped with Deming Power Pumps

